A Post-Graduate Lecture

ON

OCULAR PAIN: ITS SIGNIFICANCE, VARIETIES, AND TREATMENT.

Delivered at the West London Post-Graduate College on June 17th, 1901,

BY PERCY DUNN, F.R.C.S. ENG.,

OPHTHALMIC SURGEON TO THE WEST LONDON HOSPITAL; LECTURER ON OPHTHALMOLOGY AT THE WEST LONDON POST-GRADUATE COLLEGE.

GENTLEMEN,—The ideal subject for a post-graduate lecture, as I have observed here on a former occasion, is one which does not trench upon the province of the text-book; one which has for its basis practical facts easily lending themselves to assimilation by others; and one which does not travel beyond the limits of ordinary experience, thus avoiding the risk of making the discourse an academic display of knowledge possessing but little practical utility. In endeavouring, then, to fulfil this ideal I shall occupy your time this afternoon with a practical, and what I hope will prove to be profitable, discussion upon the subject of "Ocular Pain: its Significance, Varieties, and Treatment."

First let us briefly consider the channel by means of which the human eye is endowed with common sensation. In this connexion it seems to be a marvellous fact that the sensory nerve-supply of the eye should be solely derived from a small branch of the nasal nerve which, as you know, arises from the first division of the fifth pair. I say marvellous, for surely it might have been the case that an organ of such importance as the eye would have been provided with a special sensory nerve for itself, or at all events that more than one small sensory branch would have been supplied to it to ensure against the contingency of interruption of the main source of supply. We can only conclude, however, that nature in making things as they are knew her own business. Presumably it was not needful to establish a complicated system of inter-communication with sensory branches, while, on the other hand, in the interests of the eye itself it was merely essential to combine its sensory supply with that of the adjoining nasal cavity. The influence of this connexion is mainly manifested when the eye is exposed suddenly to a brilliant light. Under ordinary circumstances the exposure of the eye to light is provided for by the contraction of the pupil, and such contraction is no doubt amply sufficient to protect the retina from harm. But let anyone turn his eyes upwards to the shining sun at noonday, and, as we know, the act is interrupted almost immediately by the occurrence of sneezing. The explanation of this phenomenon I believe to be stimulation of the nerve-supply of the cornea. This seems to be reasonable, for while the retina is protected from harm by the contracted pupil the cornea would soon suffer were the exposure to the sun to be continued. The strong sensory impression caused by the sun's rays upon the corneal plexus is conveyed by the ciliary nerves to the central nucleus in the brain, with the result that the reflex act of sneezing is induced—an act with which is associated involuntary closure of the lids, and consequently the cessation of the exposure of the eyes to the source of irritation. But this reflex act is also, and with perhaps greater interest, illustrated when a child with acute blepharospasm is placed under chloroform for the purpose of having the eyes examined. In these cases you will recall that as soon as unconsciousness is induced and the eyelids are retracted so as to expose the cornea not infrequently sneezing follows. Here, however, the light would be only relatively brilliant, inasmuch as the ordinary daylight in a room is sufficient to induce the sneezing. Nevertheless, it must be borne in mind that the child may not have had the eyes open for several days.

I have alluded to the protection afforded the retina by the contraction of the pupil on the exposure of the eyes to light, and it is not without interest to recall how this contraction takes place. It is, of course, a reflex act; the optic nerve is stimulated by light and the pupil contracts by the impression being transmitted to the motor oculi. That is to say, the optic nerve, although a nerve of special sense, plays the part of one of common sensation. There cannot, however, be any sensory fibres, so-called, in the optic nerve, otherwise we would expect that papillitis and other inflammatory conditions of the nerve would be accompanied by pain. Thus it is of interest to note in this connexion that a nerve of special sense has been endowed with the characteristics of one of common sensation without possessing any sensory fibres. How duly in accord, however, with ordinary physiological principles it would have been had this reflex act been dependent upon stimulation of the corneal plexus: the afferent and efferent paths of the nerve impulse would then be distinctly plain, and the result doubtless would be just as satisfactory as that which now obtains. These observations might seem to suggest that nature had failed to be as wise as she might have been in regard to these pupillary arrangements. Therefore, to pursue this matter further would be merely equivalent to indulging in unprofitable speculation.

Generally speaking, it may be said that pain is an invaluable symptom, and oftentimes the saving clause, in an eye which is the subject of disease. Without it, as I shall proceed to show, patients would, indeed, fare badly. It teaches us many important lessons and provides us with many a clue to treatment. Take, for example, a case of acute glaucoma. It is not the loss of vision which compels the patients in these cases to seek advice; that is to them of secondary importance in comparison with the intense and agonising suffering with which the disease is commonly associated. Moreover, the surgeon knows that the greater the pain the more serious is the case and the greater the need for immediate interference. Thus the pain of a glaucomatous attack is the index of the peril to which the eye is subjected and marks out the line of treatment. Then, too, in the case of iritis, as long as the pain continues in these cases no improvement can be expected; on the other hand, the cessation of pain indicates the commencement of the retrocession of the disease and the progress towards recovery. Thus it is with most ocular affections—so much so that apart from diseases of the fundus, which are not painful, it may be said generally that the absence of pain in inflammatory conditions of the eye may be regarded as a favourable sign.

So much, then, for the significance of ocular pain. I have now to consider its varieties, and I mean by this the different diseases of the eye in which pain is a prominent symptom. Ocular pain varies in intensity and it varies with the disease; for example, very little pain occurs in connexion with conjunctival affections—a fact which is not difficult of explanation. The conjunctiva is only sparsely endowed with common sensation. Moreover, it is a very distensile membrane which, when inflamed, is capable of being easily stretched. Thus the sensory branches distributed to it are not compressed in any way and are consequently not irritated. The sensory nerve-supply of the conjunctiva is derived almost entirely from the lacrymal branch of the ophthalmic division of the fifth, and it is not without significance to note that no direct communication appears to exist between the nerve supply of this membrane and that of the intraocular tissues. Perhaps we may assume that nature designedly kept the two sensory sources separate and distinct. Reflect for a moment what the result would be were the ciliary nerves, after supplying the ciliary body and the iris, to be continued onwards into the conjunctiva. Obviously upon every occasion that the conjunctiva was exposed to irritation and became inflamed the ciliary nerves could not fail to be involved in the disturbing or morbid process, as well as the structures to which they were distributed, thus exposing the eye and the vision to repeated and serious risks. Again, the fact that this separate sensory nerve-supply exists is significant in view of the free communication which prevails between both the extra-ocular and intra-ocular lymphatic systems. The lymph spaces of the conjunctiva freely communicate with those of the cornea, and it is doubtless through these lymph channels that solutions of atropine and other drugs, when instilled into the conjunctival sac, reach the anterior chamber. Furthermore, the blood-vessels of the conjunctiva freely anastomose with the ciliary arteries, thus establishing the union between the extra-ocular and intra-ocular vascular systems.

The next structure to be considered in connexion with ocular pain is the cornea. There is, perhaps, no other tissue in the body so richly endowed with common sensation as is this. The cornea has been well described as the object lens of the ocular camera. The importance, therefore, of its

function is such that nature has taken especial care to protect it from harm by enabling it to resent the slightest disturbance of its integrity. The simplest example of this vigilance displayed by the cornea is when a foreign body finds its way under the upper lid. In these cases often acute pain is felt, and the pain is an invaluable symptom inasmuch as it leads to the immediate detection of the trouble and thus secures the removal of a source of danger to the cornea. The same is true in cases in which a foreign body becomes fixed upon the corneal surface. No relief is obtained until the foreign substance has been removed and the cornea is exposed to various risks until that has been accomplished. Nevertheless, sometimes it happens that the presence of the foreign body is overlooked owing to its minuteness, and the symptoms are attributed to an attack of conjunctivitis. Nothing but the exercise of extreme care in the examination of the cornea can guard against a wrongful diagnosis of this nature, while it should also be borne in mind that conjunctivitis is not usually a monocular affection. The best method of examination for foreign bodies on the cornea is that of focal illumination, but in all cases of doubt the corneal surface should also be carefully inspected with an achromatic lens of high power.

The next class of cases to be considered in which a corneal lesion gives rise to pain is that in which photophobia is present. In children of the lower classes this photophobia usually results in blepharospasm, sometimes to such a pronounced degree as to render it impossible for the surgeon to examine the eyes without the aid of a general anæsthetic. But the symptoms in these cases are altogether out of proportion to the lesion which causes them. That is to say, when the cornea comes to be examined in the vast majority of instances nothing is to be found save a minute ulcer. Such lesion would seem to be a natural explanation of the phenomena. But there are some who profess to see a difficulty as to the causation of the photophobia. Indeed, it has even been said that photophobia is scarcely explicable physiologically. Let us inquire what the difficulty is. First, it is contended that the nerve-fibres of the cornea are not sensitive to light, a contention, I submit, which is not particularly concerned in this case. Furthermore, according to Nuel,[1] "the theory is advanced that in cases of keratitis accompanied by photophobia superficial inflammation of the sensory nerves of the cornea provokes hyperæsthesia of the optic nerve, or rather of its central termination, just as ordinary light gives rise to a painful sensation in the optic nerve apparatus." But against this theory it is necessary to bear in mind, as Nuel points out, that inflammation of the retina and optic nerve is not accompanied by pain. Thus it would seem that a difficulty has been raised where no difficulty exists. The explanation of photophobia appears to be simple enough; the sequence of events in its causation is, presumably, as follows. First, there is some loss by ulceration of the superficial corneal layers; this leads to the exposure of some filaments of the corneal plexus, and whenever these exposed filaments are subjected to any stimulation pain is caused. Probably it is not exposure to the light, but exposure to the air, which excites the phenomena of photophobia. An exact parallel in this connexion is to be found in the cases of irritable ulcers of the skin, the acute tenderness of which, as was pointed out by Hilton,[2] is due to nerve filaments lying exposed in some part of the ulcerated area. "Of course," he says, "it is quite clear that every ulcer must have nerves more or less exposed on the surface, but in the case of an irritable ulcer it seems probable that the sheath of the nerve is destroyed and that the end of the true nerve-fibre remains denuded and so causes the exquisitely sensitive and painful character of the ulcer." He describes some cases of irritable ulcer in which acute suffering was caused by merely blowing a breath of air upon them. Thus, in view of the delicate nerve-supply of the cornea, it is easy to comprehend that during a process of ulceration nerve filaments are so exposed as to give rise to acute pain whenever they are subjected to stimulation from air or other cause, and that absolute closure of the lids is essential to their protection under such circumstances. Without, however, discussing this matter further it may be noted that for the most part it is the superficial ulcers of the cornea in association with which photophobia is most apt to occur, leading to the inference that in deep ulcers thereof the destruction of nerve-tissue is more complete and the liability to pain and photophobia is correspondingly reduced. Mention may here be made of the fact that the blepharospasm and photophobia have been attributed to a conjunctival source. Having regard, however, to the nerve-supply of the conjunctiva this theory does not appear to have much to support it.

In the treatment of these cases of photophobia and blepharospasm a point of special moment is to encourage the child as much as possible to open the eyes voluntarily. Instinctively by many a little furtive movement a child with photophobia will be seen to make every effort to open the eyes at the earliest moment. The patient should therefore be placed in a cot or bed with the light coming from behind and a large shade should be provided to cover the forehead. Finding itself thus protected from the light the child soon begins to try to open the lids. Another point to bear in mind is that the patients are, for the most part, underfed, anæmic, or suffering from the effects of one of the exanthemata. A full nourishing diet, therefore, is an essential in the treatment, even to including a little port wine daily. Locally the eyes should be cleansed twice daily with a warm chinosol solution (1 in 4000), and atropine and cocaine drops should be at the same time instilled. Many drugs have been suggested for administration in these cases, but I have frequently found that a mixture of arsenic and quinine, in dosage according to age, acts like a charm. Under this treatment satisfactory results can always be obtained. I have never experienced the necessity of resorting to such heroic measures as may be exemplified by that of plunging the child, upside down, into a pail of cold water. In these days of scientific methods of treatment this can scarcely be commended, and how distressing it would be to a parent should she happen to witness the half-drowning of her child which the procedure practically involves. And what about the child who is thus subjected to a severe shock to the nervous system? Although the forcible and persistent closure of the lids in bad cases may indicate a serious condition of affairs there is usually, as I have already indicated, nothing further than a slight disturbance of the corneal epithelium. In other words, no apprehension need be felt that the cornea is in any danger of sloughing or that the ulceration present will proceed to perforation. Possibly the protecting warmth afforded by the closed lids largely assists in the maintenance of the nutrition of the cornea, and so prevents the ulceration from becoming progressive.

A structure so richly endowed with nerves as is the iris would naturally lead us to expect that whenever it became inflamed much pain would be experienced. The surprising fact, however, is that it does not always happen that an acute iritis is accompanied by pain. The pain, indeed, in a certain proportion of cases may be very slight or scarcely noticeable and yet a high degree of inflammation may be present. The conclusion, therefore, is obvious that the degree of pain present in a case of iritis is not always an indication of the severity of the attack. But another point must be borne in mind—namely, that the intimate connexion subsisting between the nerve-supply and the blood-supply of the iris and ciliary body establishes the fact that inflammation of the one may mean inflammation of the other. No rule, however, exists as to this; in other words, it is quite possible for the iritic inflammation to remain confined to that structure. When, on the other hand, the inflammation extends to and involves the ciliary body, then in addition to the increased ciliary injection of the globe another symptom becomes manifest—namely, a distinct tenderness of the globe on palpation. In an uncomplicated iritis the patient does not experience pain when the globe is touched; on the other hand, tenderness is always present when inflammation of the ciliary body has supervened.

In regard to the pain associated with iritis, the systemic cause of which is either syphilis or rheumatism, certain points may be noted. First, with reference to syphilis. In passing I may reiterate my belief that iritis dependent upon a syphilitic origin is becoming less and less frequent, for reasons which I have already advanced in a published paper.[3] The pain in syphilitic iritis is very variable, sometimes being scarcely noticeable, at other times being of the acutest description. Generally it is persistent—that is, it continues

[1] Norris and Oliver: System of Diseases of the Eye, vol. iv., p. 184.
[2] Rest and Pain, second edition, p. 131.
[3] Clinical Journal, July 19th, 1899.

throughout the day and night until relieved by local treatment. The most effectual treatment in the acute cases is local abstraction of blood by means of leeches, two of which may be applied to the temple on the affected side. For the most part it happens when the pain of a syphilitic iritis has been once relieved that there is no recurrence. Since in syphilitic iritis the inflammation is associated with the exudation of plastic lymph the pupil must be brought under the influence of atropine as quickly as possible. Unless this be done there is great liability for the iris to be bound down by posterior synechiæ to the anterior capsule of the lens, with the possibility of the eyes being irretrievably damaged. Of course, the patient must be placed at the same time upon a course of mercurial treatment.

Next, in rheumatic iritis pain of marked degree is usually present, but it is mostly at night-time that the chief discomfort arises from this cause. These nocturnal exacerbations of pain are characteristic of iritis of rheumatic origin. During the day the patient is commonly almost free from pain. Again, the pain throughout is of a neuralgic character, thus differing from the throbbing inflammatory form, so to speak, associated with the intense vascularity of the globe observed in the syphilitic variety of the disease. The subsidence of the pain in rheumatic iritis is generally the first indication that the attack is passing off. Nevertheless, it is significant to remember that there may be frequent recurrences of this symptom. The best method of dealing locally with the pain in these cases is to apply dry heat. Nothing acts so well in this regard as the old-fashioned bran poultice. A large one is made, heated thoroughly in the oven, and placed over the affected eye. The pain is soon relieved and the patient falls asleep with the poultice in position. Leeching is not necessary, nor are sedative drugs in any form.

I now come to a class of cases in which the presence of pain is again of valuable import—namely, those cases in which the symptom is present in globes which have passed into an atrophic condition. In these cases tenderness on palpation and a dull aching pain are experienced in the lost eye—symptoms which, when accompanied by injection of the globe, definitely indicate that advanced degenerative changes, usually of the nature of ossification or calcification of the choroid, have supervened, and have involved such as is left of the ciliary region. The essential and imperative treatment under these circumstances is enucleation of the atrophied organ, the old belief being that such globes are a source of danger owing to their liability to set up sympathetic ophthalmia in the fellow eye. I will not discuss here whether this belief accords with the latest ideas regarding the pathology of the disease beyond stating that in order to accept it as correct we should have to stretch our imagination far beyond the range of scientific facts and to take shelter behind transcendental conjectures quite at variance with scientific research. Nevertheless, apart from these considerations, no question can be raised as to the expediency of removing a lost eye which has become painful and injected. However, it will not always be found to be an easy matter to obtain the consent of elderly patients to undergo enucleation in these cases. The difficulty which they cannot understand is that an eye, or the remains of one, which has caused them no trouble for 20 years or more should ever require to be removed. In some instances it is apparent that an affection has been conceived for the damaged organ, and the refusal to part with it is based upon grounds of illogical sentiment.

I have briefly alluded to the pain associated with acute glaucoma. I now propose to discuss this more fully. First, how is the pain in glaucoma caused? Upon this point several details of interest arise for discussion. Perhaps the most natural reply to the question is that the pain is due to the stretching of the ocular tunics in consequence of the increase in tension. Presumably much of the pain may be explained in this way, but all of it cannot be so accounted for. Indeed, it is suggested that the raised tension gives rise to paralytic symptoms within the eye, thus accounting for the dilatation and immobility of the pupil and the diminished sensitiveness of the cornea, these symptoms being attributed to the compression of the ciliary nerves as they pass forward in the supra-choroidea. By some, on the other hand, it is believed that dilatation of the pupil depends upon vascular changes by which the circulation through the iris is wholly or partially arrested. That stretching of the sclera should be a painful process can be readily understood, in view of the nerve-supply of this structure. According to Baker, "the nerves of the sclera are derived from the ciliary nerves. Within the substance of the tunic they first lose their medullary sheaths; they break up into fine fibrillæ that appear to end like the nerves of the cornea in pointed filaments between the bundles of the connective tissue fibres." Another point is that the pain in glaucoma is proportional to the degree of vascularity present and the vascularity depends upon the tension, for the higher the tension the greater is the vascularity.

But it is impossible to believe that the intense suffering of an acute glaucomatous attack can merely or solely be due to stretching of the sclera; we must therefore look further afield for the solution of this problem. The most reasonable explanation appears to be the suggestion that much of the pain is due to the compression to which the ciliary processes are subjected during the progress of the attack. Again, in addition to their compression the ciliary processes, owing to the disturbance caused to the intra-ocular circulation, are distended with blood. Having regard, then, to the fact that next to the cornea the ciliary processes are the most sensitive part of the eye, it is not difficult to comprehend, under the conditions above mentioned, that they should be the seat of intense pain in the course of an attack of acute glaucoma. So far as the treatment of this serious disease is concerned the only method in which any confidence can be placed is that of iridectomy.

TYPHOID FEVER IN SOUTH AFRICA.[1]

BY A. ELLIOT, M.A., M.D. EDIN., D.P.H. LOND.,
LATE SENIOR PHYSICIAN TO THE IMPERIAL YEOMANRY HOSPITAL, SOUTH AFRICA;
AND
J. W. WASHBOURN, C.M.G., M.D., F.R.C.P. LOND., F.R.C.S. ENG.,
PHYSICIAN TO GUY'S HOSPITAL; PHYSICIAN TO THE LONDON FEVER HOSPITAL; LATE CONSULTING PHYSICIAN TO THE IMPERIAL YEOMANRY HOSPITALS, DEELFONTEIN AND PRETORIA.

A LARGE number of the cases of typhoid fever admitted into the Imperial Yeomanry Hospital at Deelfontein during the year from March, 1900, to March, 1901, were convalescent on arrival, and the notes of others have been lost. We have, however, collected 262 cases, all of which were in the acute stage when in the hospital, and of which detailed notes were available. We have analysed these cases and have compared them with the following:—1. A series of cases which were admitted into the emergency hospital during the epidemic of enteric fever at Maidstone in the year 1897. These cases, 210 in all, have been carefully analysed by Dr. T. B. Poole.[2] 2. Statistics of 611 cases analysed by Dr. F. F. Caiger and Dr. E. W. Goodall.[3] 3. An analysis by Dr. W. Osler[4] of 829 cases treated in the Johns Hopkins Hospital during the years 1889 to 1899. 4. Statistics of 506 cases at the Eastern Fever Hospital during the years 1892–1894.[5] 5. Other accounts of typhoid fever during the campaign by Dr. H. H. Tooth, Dr. H. D. Rolleston, and Dr. F. D. Boyd. Our chief object has been to point out the main features of the typhoid fever occurring in South Africa and to ascertain whether it differs from that met with in England and America. At the same time we have considered the influence of inoculation upon the course and the incidence of the disease, and we have given a brief account of a few cases of special interest.

Mortality.—There were 36 deaths in our 262 cases, or a mortality of 13·7 per cent. At the Metropolitan Asylums Board Hospitals in 15,632 cases during the years from 1871 to 1900 the mortality was 18·44 per cent., while in 1900 the mortality was 14·09 per cent. In the Worthing epidemic in 1894 there were 2257 cases, with a mortality of 13 per cent. During the Maidstone epidemic 1847 cases were notified, with a mortality of 7·14 per cent. Dr. Osler in his text-book gives a mortality of 11·2 per cent. at the Montreal Hospital for 20 years and at the Johns Hopkins Hospital a mortality of 7·5 per cent. in the 829 cases analysed. At the

[1] A paper read before the Medical Society of London.
[2] Guy's Hospital Reports, vol. liii.
[3] Metropolitan Asylums Board Reports, 1896.
[4] Johns Hopkins Hospital Reports, vol. viii., Nos. 5 to 9, 1900.
[5] Quoted in Goodall and Washbourn's "Manual of Infectious Diseases."

Edinburgh and East of Scotland Hospital in South Africa the mortality was 10·7 per cent. In considering mortality the age and condition of the patient must be borne in mind. Most of our patients were young adults, in whom the disease is less severe than in older people but more severe than in children, and many of them had suffered from considerable fatigue and privation not only before but even after they had been attacked. Our mortality (13·7 per cent.) is practically the same as that of the Metropolitan Asylums Board hospitals during 1900 and as that of the Worthing epidemic; it is almost double that of the Maidstone epidemic and the Johns Hopkins Hospital cases.

Relapses.—61 of our 262 patients suffered from relapse, but in 36 of these relapse arose either immediately or shortly after admission, the primary attack having occurred elsewhere. Subtracting these cases, there remain 25 out of 226 patients who relapsed in the hospital, an incidence of 11 per cent. Dr. Osler, in 829 cases at the Johns Hopkins Hospital, gives an incidence of 10 per cent.; Dr. Goodall and Dr. J. W. Washbourn, in 506 cases at the Eastern Fever Hospital, an incidence of 13 per cent.; Dr. Caiger and Dr. Goodall, in 611 cases, an incidence of 11·9 per cent. Dr. Rolleston, in an analysis of 244 cases at the Imperial Yeomanry Hospital at Pretoria, gives an incidence of 21 per cent. He, however, informs us that there are included among his cases a certain number of patients who had suffered from the primary attack elsewhere, which, we think, will account for the high incidence. At the Edinburgh and East of Scotland Hospital in South Africa in 150 cases the incidence was only 5·3 per cent. Possibly this low rate may be due to the early transfer of cases to other hospitals. It will thus be seen that our incidence of relapse corresponds with the average in England and America. We have no doubt that the too early removal of patients predisposes to relapse. 36 of our cases relapsed either immediately or shortly after admission, which we believe was due in many cases to too early removal and improper food on the journey. Of the 25 cases of relapse the shortest interval that elapsed between the end of the primary attack and the commencement of the relapse was 1 day; the longest interval was 31 days; the average being 10·8 days. In Dr. Poole's cases the longest interval was 24 days and the average 9 days. Of 53 cases of Murchison quoted by Dr. Osler the average interval was 11 days. In the Johns Hopkins Hospital cases the longest interval was 36 days, the average being 8·2 days. The shortest duration of the relapse was six days and the longest 23 days, the average duration being 13·5 days. In Murchison's cases the average was 15 days. Two of our cases suffered from two relapses, and one from three. We had no deaths among the 25 cases of relapse included in these statistics, which bears out the general experience of low mortality among relapses.

Second attacks.—In 12 of our 262 cases there was a history of a previous attack, an incidence of 4·5 per cent. There were actually only 99 cases in which it was definitely stated in the notes whether the patient had or had not suffered from a previous attack. This would give a much higher incidence of second attacks, but as the fact of a previous attack not having occurred might not have been noted we prefer to accept the percentage upon the whole of the cases. Dr. J. Dreschfeld in his article in Clifford Allbutt's "System of Medicine" states that at the Hamburg General Hospital, out of 2000 cases there were 14 in which there had been one previous attack and one case in which there had been two previous attacks, or an incidence of 0·75 per cent.; while Berg only found one second attack in 1624 cases, or an incidence of 0·06 per cent. Our incidence is therefore extremely high and this appears to correspond with the experience of others who have worked in South Africa. Brigade-Surgeon-Lieutenant-Colonel Alexander Crombie,[6] for instance, in the discussion upon Dr. Tooth's paper at the Clinical Society of London, states that of 150 officers who had returned invalided from South Africa for enteric fever 6 per cent. had suffered from previous attacks. The frequency of second attacks in South Africa appears to be chiefly due to the intensity and frequency of exposure to infection. In England individuals are probably not often exposed to infection. The fatigue and privation experienced in South Africa would also be a predisposing factor in rendering individuals liable to infection. One of our patients had suffered from two previous attacks and died during the third. The remaining patients recovered. The following is a short account of these cases.

No. 28.—The previous attack occurred seven years ago. The present attack was followed by relapse. The patient recovered.

No. 84.—The patient was an officer. The date of previous attack was not stated. The patient was admitted towards the termination of the attack, which was followed by empyema. The patient recovered.

No. 103.—The previous attack was 15 years ago. The present attack was attended by diarrhœa, spots, and enlargement of the spleen. The patient recovered.

No. 104.—The previous attack occurred when the patient was a child. The present attack was attended by enlargement of the spleen and by spots, and was complicated by otitis media. The patient recovered.

No. 160.—The patient was an officer. The previous attack occurred three or four years ago. The present attack lasted for 26 days and gave the serum reaction. The patient recovered.

No. 206.—The patient had had one previous attack as a schoolboy and another during the campaign. The present attack was very severe and the patient died.

No. 222.—The previous attack occurred one year ago. The present attack was attended by enlargement of the spleen and spots. The patient recovered.

No. 232.—The previous attack occurred in India 11 years ago. The present attack was mild. The patient recovered.

No. 243.—The previous attack occurred three years ago, and the patient had been inoculated three times just before the onset. The previous attack was due to the accidental ingestion of the typhoid bacillus in experimental work. The present attack was severe. The patient recovered.

No. 279.—The previous attack occurred in Egypt eight years ago. The present attack was accompanied by spots. The patient recovered.

No. 300.—The previous attack was in April, 1900. The patient was inoculated in January, 1900. The present attack was sharp and was accompanied by enlargement of the spleen, by diarrhœa, and by copious spots. The patient recovered.

No. 54.—The previous attack occurred four or five years ago. The present attack was followed by definite relapse. The patient recovered.

The influence of inoculation upon the course of the disease.—In 211 of our cases it was definitely recorded whether the patient had been inoculated or not. 186 of these cases had not been inoculated, with 20 deaths, or a mortality of 10·7 per cent. 25 had been inoculated with 4 deaths, or a mortality of 16 per cent. The mortality was thus higher among the inoculated than among the non-inoculated. At the Portland Hospital 54 cases were inoculated with 4 deaths, and 178 not inoculated with 25 deaths. At the Imperial Yeomanry Hospital in Pretoria there were 27 cases inoculated with no deaths, and 115 cases not inoculated with 6 deaths. At the Scottish Hospital there were 15 inoculated with one death, and "about" 77 not inoculated with 10 deaths. At the Edinburgh and East of Scotland Hospital there were 18 cases inoculated with no deaths, but it is not definitely stated how many patients died among the non-inoculated. Adding together the cases at Deelfontein, Pretoria, the Scottish Hospital, and the Portland Hospital we find that there were in all 121 cases inoculated with nine deaths, a mortality of 7·4 per cent.; and 556 not inoculated with 61 deaths, a mortality of 10·9 per cent. In dealing with such small numbers the difference between 10·9 per cent. and 7·4 per cent. is too slight to point to any marked beneficial influence of inoculation upon the course of the disease. In our own series the mortality is greater among the inoculated than among the non-inoculated.

The influence of inoculation upon the incidence of the disease.—In our staff there were 44 nursing sisters; of these, 40 were inoculated and 2 contracted enteric fever, 4 were not inoculated and none contracted the disease. There were 10 ward-maids, all of whom were inoculated and 1 contracted enteric fever. There were 20 medical officers; of these, 9 were inoculated and 1 contracted enteric fever; 11 were not inoculated and none of these contracted the disease. There were 10 dressers, none of whom were inoculated and 4 contracted enteric fever. Taking the staff altogether there were 59 inoculated, of whom 4 contracted enteric fever, and there were 25 not inoculated, of whom 4 also contracted the disease. It will be noted that the 4 of the non-inoculated who contracted the disease came from

[6] THE LANCET, March 30th, 1901, p. 933

among the dressers who were younger than the rest of the staff. At the Irish Hospital, quoted by Professor A. E. Wright, 64 of the staff were inoculated and 2 contracted enteric fever; 4 were not inoculated and none of these contracted it. At the Imperial Yeomanry Hospital, Pretoria, 35 persons were inoculated and 6 contracted enteric fever; 115 were not inoculated and 16 contracted the disease. At the Portland Hospital 28 were inoculated and 7 contracted enteric fever, 13 were not inoculated and 3 contracted the disease. At the Edinburgh and East of Scotland Hospital all—namely, 58—were inoculated and 9 contracted enteric fever. Taking all of these together, we find that there were 244 inoculated, with 28 cases, an incidence of 11·4 per cent., while there were 157 not inoculated, with 23 cases, an incidence of 14·6 per cent. The difference between the incidence of enteric fever amongst the inoculated and the non-inoculated is too small to be ascribed to any protective influence exerted by inoculation. We have not included the statistics of the Scottish Hospital, as the exact number of inoculated and non-inoculated is not definitely stated. The not infrequent occurrence of second attacks of enteric fever renders us doubtful of the prospect of successful inoculation in the future. The considerable risks of contracting enteric fever incurred in hospital work during this campaign are well exemplified by the above figures. Of a total of 401 persons engaged in attending the sick, 51 suffered from the disease, an incidence of 12·7 per cent.

Hæmorrhage.—We have included under hæmorrhage only those cases in which several ounces of blood were passed. There were in all 16 cases, an incidence of 6·1 per cent. At the Imperial Yeomanry Hospital in Pretoria there was an incidence of 8·7 per cent.; in Dr. Osler's cases 6 per cent.; in Dr. Goodall and Dr. Washbourn's cases 7·9 per cent., in Dr. Caiger and Dr. Goodall's cases 8·6 per cent., and in the Maidstone cases 5·5 per cent. Our incidence appears thus to be about the average. Of our 16 cases 8 died, a mortality of 50 per cent., and five others were noted as being exceedingly severe cases. Dr. Rolleston states that of 21 cases at the Pretoria Hospital 16 died, a mortality of 76 per cent. It thus follows that in South Africa hæmorrhage in enteric fever is a symptom of grave signification. In England and America the mortality does not appear to be so high; in Dr. Poole's cases there were two deaths, a mortality of 20 per cent., and in Dr. Osler's cases the mortality was 10 per cent. In the majority of our cases—namely, in 13 out of 16—the patients suffered from diarrhœa.

Phlebitis.—There were 15 cases of phlebitis, an incidence of 5·6 per cent. At the Edinburgh and East of Scotland Hospital the incidence was 6 per cent. Lieutenant-Colonel Crombie states that 25 per cent. of his cases suffered from phlebitis, but this high incidence appears to be due to the fact that many of his cases were invalided home on account of the supervention of this complication—a circumstance which vitiates his statistics. In Dr. Poole's cases the incidence was 3·8 per cent., in Dr. Caiger and Dr. Goodall's cases 3·4 per cent., and in Dr. Osler's cases 1·9 per cent. It thus follows that the incidence of phlebitis in South Africa is greater than in England or America. In our cases the left leg was affected 10 times, the right leg 4 times, and both legs twice. The phlebitis ensued during convalescence 8 times, during the pyrexial stage of the primary attack 4 times, during a relapse twice, and in one case the date was not noted. When occurring during the pyrexial stage it was towards the end of that period, the earliest appearance being on the sixteenth day. The latest date of its appearance after the end of the pyrexial stage was 30 days. It is probable that some cases developed phlebitis after leaving the hospital, but of these we have no record.

Pneumonia.—There were 10 cases of pneumonia, an incidence of 3·05 per cent. In Dr. Caiger and Dr. Goodall's statistics the incidence was 3·2 per cent., in Dr. Osler's statistics it was apparently 2·05 per cent., at the Pretoria Hospital it was 2·2 per cent., and at the Edinburgh and East of Scotland Hospital it was 1·3 per cent. The incidence thus appears to be about the same as in other statistics. Of our 10 cases 5 died, a mortality of 50 per cent., and at the Pretoria Hospital there was a similar mortality—namely, 2 deaths out of 4 cases.

Pleurisy.—There were 10 cases of pleurisy, an incidence of 3·05 per cent. In one of these cases there was effusion, which resolved, and in another case an empyema developed which had to be operated upon. In the Maidstone epidemic the incidence of pleurisy was 2·2 per cent. and in Dr. Caiger and Dr. Goodall's cases it was 2·6 per cent.

Bronchitis.—Bronchitis was not a marked feature of the attack. In 8 cases it was sufficiently severe to be specially noted.

Periostitis.—There were 6 cases of periostitis, an incidence of 2·2 per cent. In the Maidstone cases the incidence was 5 per cent.; in Dr. Caiger and Dr. Goodall's cases it was 1·1 per cent. In 3 of the cases the tibia was affected, in 1 the femur, in 1 the index finger, and in 1 the transverse process of the atlas. They all occurred during convalescence, except 1 case which occurred at the end of the pyrexial stage. The case in which the atlas was affected was an interesting one. A painful swelling appeared in the parotid region, which was at first considered to be a parotitis. When opened by Mr. H. A. Ballance the transverse process of the atlas was felt to be bare. The patient made a good recovery.

Condition of the bowels.—Of the 234 cases in which the condition of the bowels is clearly stated in 100 there was constipation, in 84 diarrhœa, in 41 alternate constipation and diarrhœa, and in 9 the bowels were regular. It will thus be seen that in 42·7 per cent. cases there was constipation throughout the attack. Dr. Poole states that 50 per cent. of his patients at Maidstone suffered from constipation, and Dr. Osler in his analysis of 829 cases at the Johns Hopkins Hospital states that 34 per cent. suffered from constipation. In the Edinburgh and East of Scotland Hospital 37 per cent. suffered from constipation. From these figures it would appear that constipation, not only in South Africa, but also in England and America, is much more common than is usually imagined. In the severe cases diarrhœa was most frequent, and of 35 of our fatal cases there was diarrhœa in 29, constipation in 4, and alternating constipation and diarrhœa in 2.

Perforation.—There were 6 cases of perforation—an incidence of 2·2 per cent. Dr. Dreschfeld gives an incidence of from 2·5 per cent. to 3 per cent.; Dr. Caiger and Dr. Goodall, 4·9 per cent.; Dr. Goodall and Dr. Washbourn, 3·1 per cent.; Dr. Osler, 2·7 per cent.; and at the Edinburgh and East of Scotland Hospital the incidence was 2 per cent.

Cardiac complications.—In many cases the pulse was exceedingly rapid and the patient suffered from cardiac collapse out of proportion to the severity of the attack. We attributed these cases to previous fatigue. Dr. Rolleston calls attention to the rapidity of the heart occurring during convalescence in patients who have been over-fatigued before the attack. We have also noticed the same during convalescence.

Convulsions.—In 2 cases there were well-marked convulsions, one of which we attributed to the administration of strychnine.

CASE 1.—The patient died at the end of the second week of a severe attack. On the day preceding death there were pharyngeal spasm and retraction of the head. Nasal feeding, which was attempted, brought on general convulsions. No necropsy was made.

CASE 2.—The patient died on the fifteenth day of the attack. On the eighth day there were general convulsions with opisthotonos and trismus, which subsided under morphia and chloroform. He had been taking for the previous 36 hours five minims of solution of strychnine every four hours. We attributed the convulsions to the strychnine. (Dr. Osler has described cases of convulsions occurring during enteric fever.)

Abdominal pain.—In 15 cases a special note was made of the occurrence of abdominal pain during the attack. The pain was at some time so acute as to suggest perforation, and, indeed, in one case the abdomen was opened under this belief. The peritoneum was found to be perfectly healthy and the patient made a good recovery. Most of these cases appear to be simple colic. It is possible that in some of them there was slight peritonitis. Dr. Caiger and Dr. Goodall state that in 2·2 per cent. of the cases analysed by them the patients suffered from peritonitis without perforation.

Bladder trouble.—Difficulty in micturition was noted in 5 cases at a time when the mental condition of the patient was perfectly good and in some cases quite early in the disease. In 1 of the cases a catheter had to be used all through the attack and in 3 cases on several occasions. In 2 other cases there was distinct cystitis. This list does not include the cases in which retention occurred while the patient was unconscious.

Parotitis.—There were 3 cases of parotitis, an incidence of 1·1 per cent. Dr. Caiger and Dr. Goodall give an incidence of 0·6 per cent., Dr. Poole an incidence of 0·5 per cent., Dr. Osler an incidence of 1·4 per cent., and at the Pretoria Hospital the incidence was 1·1 per cent. In 1 of our cases

the parotitis was double and suppurative; the patient died. The other 2 cases were unilateral, one being suppurative and the other non-suppurative; both recovered.

Pharyngo-tonsilitis.—There were 10 cases, an incidence of 3·05 per cent. In some of the cases there was exudation upon the tonsils of a follicular character.

Abscesses.—In 1 case two small abscesses developed, one in the right inguinal region and the other in the peri-anal tissue.

Gangrene of the skin.—In 1 case local necrosis of about the size of a florin occurred in two places—on the anterior surface of the right thigh and over the right tibia. The patient recovered.

Appendicitis.—In 2 cases enteric fever immediately followed a definite attack of appendicitis. In 1 case the patient recovered, but the other was fatal. Post mortem adhesions around an appendix distended with muco-pus were found in addition to the typhoid lesions. In another case, not included in our statistics, suppurative appendicitis followed an attack of enteric fever. Recovery ensued after operation. In the Edinburgh and East of Scotland Hospital a mild attack of appendicitis supervened in 1 case.

Eruptions.—In some of the cases the typhoid eruption was exceptionally profuse. In 2 cases a scarlatiniform eruption occurred which was attributed to an enema. In 2 cases there was a distinct *tache bleuâtre*. In 6 cases purpuric spots appeared on the skin, especially on the limbs; 3 of these cases were associated with spongy gums, and in 1 case there was frequent and profuse hæmorrhage.

Secondary fever.—Temporary rises of temperature occurred in a large number of cases. In many of these cases the fever appeared to be due to constipation.

Otitis media.—There were 4 cases, an incidence of 1·5 per cent.

Pericarditis.—There were 3 cases, an incidence of 1·1 per cent.

Hepatitis.—In 1 case there was hepatitis. The patient had a great and uniform enlargement of the liver during the pyrexial period. Abscess was suspected, but the enlargement subsided with the defervescence. The patient had not suffered from dysentery previously. Dr. Rolleston mentions a case of solitary liver abscess following enteric fever in a patient who had not previously suffered from dysentery and who recovered after operation. Dr. Osler reports a case of enlargement of the liver which subsided and ended in recovery.

Jaundice.—This occurred in only 1 case and was associated with fatal pneumonia.

Orchitis.—There were no cases of orchitis.

Dysentery.—There were 21 cases of dysentery occurring either during the attack of enteric fever or shortly before or after it. In 6 of these cases the dysentery preceded the attack, and all of the patients recovered; in 4 cases the dysentery occurred during the attack, and 2 of the patients died; while in 11 cases the dysentery occurred during convalescence, and 4 of the patients died. It would thus appear that dysentery arising either during the attack or during convalescence is of serious signification, the mortality being 33·3 per cent.

Malaria and rigors.—In 11 cases definite rigors occurred during the attack. In 2 cases the malaria plasmodium was found, and probably was present in a third, the patients at the same time giving the serum reaction. Dr. Poole noticed rigors in 8 of his cases, an incidence of 3·8 per cent., and Dr. Osler has specially called attention to their occurrence. Omitting the definite malaria cases, our incidence was 3·05 per cent. The following is a history of the 11 cases:—

CASE 1.—This was a severe and prolonged attack of enteric fever, the pyrexia lasting for nine weeks. During the fourth week there were daily rigors without apparent cause. The patient was attacked with phlebitis three weeks after the first rigor. The patient recovered.

CASE 2.—This was a severe attack, the pyrexia lasting for 25 days. There were rigors on the sixth, seventh, and eighth days of the disease. Pneumonia developed nine days after the first rigor and phlebitis nine days later. This patient had had malaria before. The patient recovered.

CASE 3.—The patient had been ill for several weeks before his admission and he died on the sixth day after admission. While in the hospital he had several rigors.

CASE 4.—This was a severe attack, the fever lasting for four weeks. Rigors occurred on the last day of pyrexia and again on the fourth, seventh, and tenth days of convalescence. The patient recovered.

CASE 5.—This was a severe attack, lasting for 63 days. Several rigors occurred during the attack without definite cause. The patient recovered.

CASE 6.—This was a moderately severe attack, lasting for 27 days. Several rigors occurred nine days after phlebitis had developed. Nine days later the patient was attacked with otitis media. The patient recovered.

CASE 7.—Rigors occurred during an ordinary attack without any definite cause. The patient recovered.

CASE 8.—The patient died from fever at the end of 21 days. Several rigors occurred during the attack.

CASE 9.—This was a mild attack, the fever lasting about 11 days. There were rigors on the last two days of pyrexia. Doubtful malaria parasites were found in the blood. The patient recovered.

CASE 10.—This was a severe attack, the pyrexia lasting for 59 days. The patient had had several rigors, and malaria parasites were found in the blood. He had suffered previously from malaria on the West Coast of Africa.

CASE 11.—The patient had been ill for some weeks before admission into the hospital, where he suffered from pyrexia for 18 days. Malaria parasites were found in the blood, and it gave the serum reaction. The patient recovered.

Arthritis.—There were 8 cases of arthritis, an incidence of 3·05 per cent. In 1 case there was effusion. The following is a short account of these 8 cases:—

CASE 1.—On the third day of convalescence there was pain in the fingers, shoulders, and knees, without effusion and without rise of temperature. Similar pain recurred on the nineteenth day of convalescence.

CASE 2.—There was pain in the hips and ankles occurring on the ninth day of convalescence; this subsided in a few days.

CASE 3.—This was a severe attack of enteric fever with petechiæ and spongy gums, followed by a relapse. Pain occurred in the right elbow with effusion and redness. The temperature went up to 104·2° F. and there was slight fever for the next two days. The inflammation subsided in about a week.

CASE 4.—On the fourteenth day of convalescence pain occurred in the left shoulder and arm, with slight pyrexia lasting for two or three days.

CASE 5.—On the twelfth day of convalescence there was pain in the right arm, hand, and ankle, the temperature being 103° F. Pyrexia lasted for about six days. There was a similar attack a month later which lasted for seven days.

CASE 6.—On the last few days of the pyrexial stage pains occurred in the knees and elbows, lasting for several days.

CASE 7.—During the pyrexial stage pains occurred in the back, shoulder, and ankle and lasted for two or three days. This patient had had rheumatic fever before.

CASE 8.—During convalescence rheumatic pains occurred in the right arm. This patient had previously suffered from rheumatic fever.

It will be observed that in the last two cases the patients had previously suffered from rheumatic fever, which was doubtless the cause of the arthritis. But in the others no other cause than the enteric fever could be ascertained. Most of them occurred during early convalescence. The arthritis may be compared to that arising in scarlet fever—a comparison which is supported by the occurrence of suppurative arthritis in a case of which we have only the notes of the post-mortem examination.

Epistaxis.—Epistaxis was very frequent during the early stage.

Tender toes.—There were a good many cases of tender toes, such as have been described by Dr. Handford. The toes were excessively tender, requiring a cradle to keep off the pressure of the bed-clothes. There was no swelling and they all recovered.

Conclusions.—The conclusions which we draw from the analysis of these cases is that the type of typhoid fever met with in South Africa does not differ in any essential respects from that met with in England and America. The mortality and the incidence of complications are much the same as in the variations which are met with elsewhere. The only complication which appears to be specially prominent is phlebitis, which occurred in 5·6 per cent. of our cases. This was not very much higher than in Dr. Poole's cases at Maidstone, and in Dr. Caiger and Dr. Goodall's cases at the Metropolitan Asylums Board hospitals, which were 3·8 per cent. and 3·4 per cent. respectively. We do not feel that inoculation has any marked influence either in preventing or in modifying the disease.

NOTE ON THE "BLOOD RELATIONSHIP" OF MAN AND THE ANTHROPOID APES.[1]

BY ALBERT S. F. GRÜNBAUM, M.A., M.D. CANTAB., M.R.C.P. LOND.,

ASSISTANT LECTURER IN PHYSIOLOGY AT UNIVERSITY COLLEGE, LIVERPOOL; ASSISTANT LECTURER AT THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE; AND ASSISTANT PHYSICIAN TO THE LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

THE new biological test for blood, depending on the investigations of many workers but brought into prominence and practical use by the experiments of Friedenthal,[2] of Deutsch,[3] and of Uhlenhuth,[4] has been pursued with much vigour, in this country more especially by Nuttall.[5] Having had the good fortune to obtain considerable quantities of the blood of three anthropoid apes—viz., the gorilla, the orang, and the chimpanzee—I am able to add a few new and, I venture to think, interesting facts to those already recorded.

The following brief recapitulation of what is already known is rendered necessary by the newness of the subject. In a general way it may be said that the serum from an animal—e.g., a rabbit—which has been injected intraperitoneally several times with any given organic fluid will, if mixed in small quantity with a dilute solution of the fluid used for injection, produce a more or less marked precipitate. To such a serum has been given the name "anti-serum." Hence the serum from a rabbit that has been treated in this way with human blood which gives a precipitate with human blood may be, although somewhat paradoxically, called "human anti-serum."[6] Such a serum has, to use the term applied by Durham to agglutinating sera, a "special" although not a "specific" action. For instance, my "chimpanzee anti-serum" gave a *slight* but distinct turbidity after a few hours with horse blood.

Other observers have already pointed out that "human anti-serum" precipitates the lower monkeys' blood to a slight extent. Adopting the general mode of application of the test, I find that "human anti-serum" gives a precipitate with all three species of anthropoid apes already named, and to me this precipitate is practically indistinguishable from that obtained with human blood either in quality or quantity. Occasionally it has seemed that the blood of the orang gave a more gelatinous precipitate as compared with the granular precipitate of the other bloods, but this may have been due to accidental circumstances. The granular precipitates from other bloods are also liable to become sticky when shaken up. But it is not only by the action of "human anti-serum" on anthropoid blood that this close relationship of the various bloods may be demonstrated. I have prepared gorilla, orang, and chimpanzee anti-serum. Tested in the way described they all react, not only with their own blood but with each of the others, *and also with human blood*. Here again, in the absence of definite standards, I am unable to assert that there is any difference of reaction amongst the many combinations of anti-serum and blood which can be made with the four above-mentioned bloods and sera.

I have not noticed any record of a microscopical application of this test applied in the same way as in serum diagnosis. By this method, using one drop of 1 per cent. blood solution with one drop of anti-serum, a result is produced reminding one very much of the clumping of bacteria, and in this way, too, it is possible to differentiate human and anthropoid blood, because there is an earlier and more complete reaction when the anti-serum is used on its own blood. By suitable dilution also of the anti-serum it should be possible to improve the utility of the microscopical method. I hope that the question of a quantitative method will receive the attention of workers in this field.

Pressure of other work prevents any present further investigation on my part in this direction and induces me to record at this stage the few results already obtained.

Liverpool, November, 1901.

[1] Most of the facts here recorded were demonstrated to a meeting of the Liverpool Medical Institution on Nov. 14th, 1901.

[2] Archiv für Anatomie und Physiologie, 1900, p. 494. The investigations of this talented physiologist seem to have been generally overlooked.

[3] Bulletin Médical, Sept. 8th, 1900, and Centralblatt für Bakteriologie, Band xxix., p. 661.

[4] Deutsche Medicinische Wochenschrift, 1901, *Nos.* 6, 17, and 45.

[5] Journal of Hygiene, vol. i., 1901, p. 367.

[6] For the sake of uniformity the serum of an animal immunised against human blood is termed "human anti-serum," against chimpanzee blood "chimpanzee anti-serum," and so on.

ON THE ADVISABILITY OF REMOVING THE APPENDIX VERMIFORMIS AFTER SUPPURATION CAUSED BY APPENDICITIS.

BY WILLIAM H. BATTLE, F.R.C.S. ENG.,

SURGEON TO ST. THOMAS'S HOSPITAL.

FOR some time the question has occupied my attention as to whether the appendix vermiformis should be removed after suppuration has been caused by its disease—that is, in cases where for some reason or another it was not removed at the time operation for the evacuation of pus was performed. The opinions held which govern the treatment of the appendix in these cases are much opposed. The first is that if a patient has an abscess the result of appendicitis there is such a profound destruction of parts as a consequence that the surgeon need trouble no more about the case—when once the abscess is closed the patient is cured as the appendix is obliterated. This view I have found, in conversation with various members of the profession, is rather generally held at the present time.

By a statement in his admirable work on the diseases of the appendix vermiformis Dr. H. P. Hawkins lent some support to this view when he stated "that eight out of 38 cases of perityphlitic abscess had a history of previous attacks of non-suppurative appendicitis, and in three of them a concretion was found." He had only met with one instance of second perityphlitic abscess. Quite recently a well-known surgeon, Sir W. Mitchell Banks, is reported to have said,[1] when taking part in a discussion on appendicitis: "As soon as the suppurative stage had been diagnosed the pus should be evacuated, when the appendix was practically destroyed, and such patients had no return of appendical trouble."

The second view held by some is exactly the opposite of the first and may be summarised as follows, that in every case of perityphlitic abscess the appendix should be removed at the time of the operation.

Mr. Rutherford Morison[2] has devised a method of operating which he has successfully practised on several occasions, by means of which he considers this should be done, and of which, he says, the mortality is small. It involves an extensive incision of the abdominal wall and even to surgeons of large hospital experience appears somewhat formidable, and if attempted by one of slight operative skill might prove rather disastrous, whilst one cannot regard it as free from great risk of subsequent hernia. There is another thing against it, and it is this, that in pelvic cases it may not be possible to remove the appendix. The operation will not succeed in all cases.

Again, other surgeons hold the opinion that whilst it is advisable to remove the appendix when the abscess is opened there are cases in which such a procedure would involve unnecessary risk to the patient. There are many conditions any one of which in a particular case may appear so important as to induce the operator to postpone the removal of the appendix. For instance, the patient may be to ill to permit such a prolongation of the operation as might be required; the appendix may be so placed that it cannot be found; it may be considered that removal would involve too rough manipulation of bowel already softened by inflammation, the adhesions being very firm; or some areas of healthy peritoneum might be opened to infection from the abscess cavity. My experience has been in favour of the opinion last mentioned and tells against the view of non-interference. There appears to be a want of unanimity regarding the necessity for getting rid of the appendix if it has not been excised at the first operation, but some cases described below strongly emphasise, to my mind, the advisability of doing so.

[1] THE LANCET, Feb. 23rd, 1901, p. 564.

[2] THE LANCET, Feb. 23rd, 1901, p. 533.

It was for a long time my impression that the advocates of the first view were correct, but circumstances have now convinced me to the contrary, and the appendix should be removed as soon as possible after the healing of the abscess. My faith in the value of the general statement that removal is unnecessary was shaken, in the first place, by the formation of a second abscess (some months after the first had been treated by me) in the case of a boy, aged 16 years. The first abscess was a large subacute one with much surrounding exudation, and the pus was already making its way through the abdominal wall when the abscess was incised. Relying on the prognosis which I had been taught was the correct one I had given his parents the assurance of his freedom from further trouble of the kind. Some time after this, when I was passing by the theatre of the hospital, a young female patient was being taken in for operation. As the expression of her face indicated acute abdominal mischief I made further inquiry and waited for the operation. She had had a perityphlitic abscess treated six months before in a large hospital. The appendix was now in a condition of acute inflammation, with sloughing, but contained no concretion. She had diffused septic peritonitis secondary to this state of the appendix and died some hours after the operation. A valuable life would probably have been saved had the appendix been removed in the quiet period.

The advisability of this course is well illustrated by the following case in which the necessity of removal of the appendix was carefully impressed on the parents.

CASE 1.—In April, 1901, I saw a boy with my friend Dr. A. A. Brockatt of Malvern. His illness had commenced four days before with pain in the abdomen and sickness, the pain not being of a very severe character or the vomiting urgent. He had a temperature of over 101° F. and did not look very ill, but his pulse was remarkably soft and compressible. The abdomen was much distended; there was some dulness in the flanks; it was tender on pressure, especially about the right iliac fossa, and did not move well with respiration. Next day there was rather less distension of the abdomen and the dulness was mostly on the right side, where fluctuation was detected. An incision through the abdominal wall at the most prominent part gave exit to brownish, very offensive pus. As the coils of intestine were recently adherent and the appendix was not easily found it was not deemed advisable to make a prolonged search. The parents were advised to have the appendix removed, but from some cause or other this was not done, and in June an acute abscess developed in the same situation. The surgeon who was called in to operate on June 11th removed the appendix and drained the abscess, but the operation was a difficult one and the illness which followed was prolonged and complicated by the formation of a fæcal fistula. The appendix was enlarged and dusky red; in it there was the scar of an old perforation. (I am indebted for these notes to Dr. W. O'Donnell who kindly wrote to me about the case.) Here a second attack of suppuration, which might have been prevented, followed within three months; the boy suffered most severely and ran great risk.

Even if the appendix does not induce a second attack of suppuration it may cause a renewal of attacks which have made the patient's life a burden at times and prevented his following his employment, as shown by the following accounts. In both the attacks recurred after the abscess healed and suppuration, localised and diffused, might have ensued.

CASE 2.—In 1899 I was asked to see a medical man who was suffering from appendicitis. He had had several attacks during the preceding 10 years, some of them severe, and they had interfered very much with his practice. There was a hard mass in the right iliac fossa which extended to about the mid-line. In this there was evidence of fluctuation, whilst the temperature and other symptoms also pointed unmistakably to abscess. He was removed to a surgical home and preparations were made for operation. But after the administration of the anæsthetic and incision through the skin it was noticed that the tension of the abscess was much less, and when examination of the rectum was made pus was found showing that the abscess had burst through the wall of the rectum. He was examined per rectum before the operation was commenced and beyond adhesion and softening of the wall there was nothing to show a tendency to perforate. The patient was sent back to bed and in three weeks he had recovered from the rectal discharge. A small abscess required incision in the line of the recent scar in front after his return home. He did not recover his strength very quickly and in a few months began to complain again of pain in the region of the appendix and at his request this was removed. The operation was an easy one, there being no adhesions. The appendix was the subject of a chronic catarrhal inflammation with some stricturing towards the proximal end. He has continued well since and resumed active practice.

CASE 3.—On Oct. 18th, 1901, I saw a clergyman, aged 43 years, with my friend, Dr. A. E. Godfrey, who gave the following history. At Christmas, 1897, he had an attack of appendicitis and was ill for six weeks. An abscess formed which discharged per rectum, the discharge continuing for from 10 to 14 days. A band could be felt crossing the lower part of the abdomen on palpation. In October, 1899, he had an attack of sharp pain in the abdomen which lasted for three days, for which he was obliged to keep his bed. In the summer of 1900 he was ill for some days and was ill again a few weeks after that. In February, July, and September (1901) he had other attacks, being ill for ten days on each occasion. He suffered from sudden pain in the right side of the abdomen and vomiting. In February the vomiting was severe, and in September the pain was most troublesome, lasting longer than usual. At the operation, on Oct. 26th, for removal of the appendix nothing could be seen of it when the peritoneum was opened. There was no undue resistance or fold to mark its position, and it was only on separating the cæcum from the peritoneum of the iliac fossa that its proximal end could be discovered. It ran inwards and was adherent to the rectum by its tip, whilst lying concealed in a bed of adhesions. It was somewhat difficult to separate, the adhesions being firm and vascular. After removal it was found to be sausage-shaped, elongated, and thickened, contained muco-pus, and showed a tight stricture near the proximal end, about half an inch in extent. It appeared rather tense and fluctuating and suggested the near approach of another attack. There was a strong adhesion of the omentum to the peritoneum in the iliac fossa. The operation was done after displacement of the rectus to one side; the result was most satisfactory. He is no longer afraid to eat ordinary articles of diet which previously so often caused pain. This patient had been dissuaded from undergoing operation before he consulted Dr. Godfrey.

It may be considered that if a fæcal concretion is found in the abscess cavity the removal of the appendix need not be so strongly urged. It must, however, be remembered that there may be more than one concretion in the appendix and all of them may not have escaped out of the ulcerated opening. Of the average number of concretions in an appendix we have, so far as I know, very little information. There is an opinion that as a rule there is only one; but Dr. A. E. Russell, our resident assistant physician, who is a very careful observer, informs me that it is not at all uncommon to meet with two or three. The difficulty in getting the patient well in Case 4 was explained ultimately in this manner; two concretions were removed from the abscess with the pus, but a third remained behind and caused repeated abscess.

CASE 4.—A labourer, aged 40 years, was transferred from a medical ward to my care on July 10th, 1899. It was noted that he had been taken ill on June 28th with abdominal pain and vomiting. There was also a history of attacks of pain in the side of the abdomen, which he called "stitch," for a period of four years. On admission a swelling was present in the right iliac fossa, evidently an abscess. At the operation an incision was made through the right rectus sheath and the muscle displaced inwards. The abscess extended up behind the cæcum and the ascending colon, being shut off by adhesions from the general peritoneal cavity. Two fæcal concretions were removed from the abscess cavity which was irrigated and drained. The appendix was not found. He had still a sinus when sent to a convalescent home on July 26th. He was re-admitted in September, 1899, and a stitch was removed; the sinus was also scraped. The sinus closed, but he was re-admitted in November with another abscess which was opened. He was again admitted on Feb. 2nd, 1900, for a sinus which had followed a recent abscess in the old situation. On Feb. 22nd the appendix was excised; it was adherent to the pelvic wall and was separated with some difficulty, its walls were much thickened and in some parts cicatrised, and it contained a fæcal concretion. The wound was closed without drainage and healed without suppuration.

In yet another case a concretion left in the appendix was found to have been the cause of repeated attacks of suppuration, two of which were not clearly localised and both were very dangerous. The recovery from the first attack without sinus, with an appendix left *in situ*, containing a fæcal concretion, over which ulceration and perforation had probably taken place, is especially worthy of notice. It should certainly have been removed, but the surgeon had no doubt good reasons for not prolonging the first operation, and his decision was justified by the recovery of the patient.

CASE 5.—A girl, aged 14 years, was admitted into Beatrice Ward of St. Thomas's Hospital on Dec. 21st, 1900. It was stated that she had had an operation for peritonitis in May of that year, that on recovery from this she was sent down to a Brighton convalescent home, where in July she had an abscess of the right side of the abdomen. She was taken ill again four days before admission to St. Thomas's Hospital with abdominal pains and vomiting. The pain had not been very severe nor was the vomiting distressing. The abdomen was not rigid or distended and moved well on respiration. She said that she had pain which she referred to the right side of the lower abdomen underneath the right rectus; this pain was increased on pressure and there was some rigidity of muscle induced by firm pressure. The pulse was good, the temperature was 100·2° F., the tongue was clean, and the bowels had acted after a dose of castor oil. There were two scars in the lower abdomen—one made at the first operation in the middle line below the umbilicus, the other in the right linea semilunaris. With such a history, and in spite of the slightness of her symptoms, I thought immediate operation indicated. About two hours after admission the appendix was removed through an incision to the inner side of the outer of the two scars, the rectus muscle being displaced inwards. On opening the peritoneum a quantity of thin pus of dirty yellow colour and fæcal odour escaped. There were no recent adhesions; the neighbourhood of the appendix was washed with saline sterilised water, and the abdomen was closed. The appendix, which was bound down with old adhesions, was somewhat difficult to find and to separate; it contained a fæcal concretion and over it there was a ragged ulcer communicating freely with the peritoneal cavity. The scar in the linea semilunaris gave way a week later and discharged a small quantity of offensive pus for about a week, otherwise convalescence was not retarded in any way.

If the concretion which first caused the outbreak of suppuration remains in the appendix it may be the cause of a fæcal sinus, as it was in the following case. It is rather interesting, however, to note that the ulceration had healed and the sinus did not lead directly into the appendix at the time of operation. Yet who can doubt that other attacks of inflammation and possibly suppuration would have followed escape of the concretion, had it been able to get away, when there was in addition such a definite stricture of the appendix near the opening into the cæcum? Should the concretion escape from the appendix but not come away with the pus it may cause the formation of a sinus which will not heal until the concretion is removed. Some years ago I operated on a pelvic abscess in a young girl and could not find the appendix or any cause for the abscess. A sinus formed in the lower part of the wound and persisted for some months. Thinking this was possibly due to a concretion which had been caught in the drainage track the sinus was carefully sounded. A concretion was struck, the urethral forceps were introduced, and with some difficulty it was extracted in fragments. After this the sinus rapidly closed.

CASE 6.—A man, aged 22 years, a soldier, was admitted under my care into St. Thomas's Hospital suffering from intestinal fistula on July 31st, 1899. He had had attacks of appendicitis in March and August, and later, in November of 1898, he had been landed at Port Said from a troopship and been treated in the Lady Strangford Hospital for abscess. The appendix was not found when the abscess was opened. The following day the dressings were saturated with fæces and pus. A fortnight later he also passed pus by the rectum. Convalescence was retarded, but with the exception of the fistula he was in fair health when he left the care of Dr. E. Cuffey (to whom I am indebted for the notes). The discharge from the fistula was usually small in amount, but excess in diet or undue exercise was punished by a profuse discharge, yellow in colour. A hard collar-like lump could be felt under the scar in the right iliac fossa, and to this the probe directly passed. The operation was not performed until other methods had been tried without benefit. The appendix contained a fæcal concretion, of about the size of a cherry-stone, situated about a quarter of an inch from the base, whilst to its proximal side there was a complete stricture. The wound was sutured in layers so as to remedy the weakness of the scar which showed itself as a result of the prolonged suppuration, and he made a rapid recovery, the abdominal wall being without weakness some months later.

When a fistula which is not fæcal persists it is most commonly the result of irritation from a ligature or suture, and removal of this by means of a scraper with subsequent packing of the wound will suffice to cure it. Here there is not necessarily disease of the appendix. In the following case the sinus persisted until the appendix had been removed. The sharp bend in it caused by the angle at which it was adherent to the abdominal wall produced the same effect as that of a stricture of its lumen.

CASE 7.—A carman, aged 22 years, was transferred from the care of Dr. Hector Mackenzie to my ward in St. Thomas's Hospital on March 1st, 1901, for a large abscess in the right side of the abdomen, in which situation the patient had complained of pain for a period of six weeks. The pain had not been sufficiently severe to prevent his doing his work, although it had been fairly continuous until a fortnight ago, when it became severe and he had rigors and vomiting. The swelling extended from the middle of the iliac fossa to the lower ribs and backwards into the loin. It was very tender and fluctuating. Incision was made in the lumbar region and a large amount of very offensive pus was evacuated. The cavity was washed out with saline fluid and a drainage-tube was inserted. He left the hospital well on March 20th excepting for a sinus in the lumbar region, from which there was little discharge. He returned to have the sinus scraped in April, but little benefit resulted from this and he entered the ward for removal of the appendix on May 15th. The oblique incision with displacement of the rectus was used. The appendix was adherent to the abdominal wall about four inches above the anterior superior spine. The omentum was adherent in the iliac fossa. A bullet probe was passed to the point at which there was adhesion of the appendix, but did not penetrate the entire thickness of the wall. The adhesions were dense and required a long incision to deal with them, the lowermost linea transversa requiring separation. The appendix was thinned where adherent to the wall, the subject of chronic catarrh and bulbous in shape, curled up on itself. In order to remove it, it was divided near the cæcum, turned up, and dissected out. He had a good deal of vomiting after the operation and some stitches in the anterior part of the wound gave way, but he left on June 20th, having quite recovered.

It will be observed that the opening at the tip of the appendix had closed before it was removed. This was after the prolonged rest in bed and careful dieting. Few doubted who saw the appendix that indiscretion in diet or over-exertion would have brought on another attack of inflammation.

I think there is only one exception to the rule that the appendix should be excised in all cases after the patient has recovered from the suppuration, if it was not found possible or advisable to remove it when the abscess was opened. This exception is when the appendix has sloughed off and is lying free in the pus or comes away during the healing of the abscess—not a very common occurrence when the suppuration is localised, but I have found it. It has been pointed out that there is not infrequently more than one concretion and there is no way of proving the exact condition of things without removal of the appendix and examination of its interior. These concretions are not faceted like gall-stones, so that it is not possible to say from the examination of one whether others are left or not.

It may be held, I think, that the evacuation of pus from an appendix abscess may be safely done through the ordinary incision; that it is not necessary to complicate the operation by any procedure which increases the risk; and that the removal of the appendix at a second operation, when the parts are quiet, will give a better chance to the patient in many, if not most, of the cases than a removal unwisely attempted or persisted in at the first operation. The adhesions forming after the inflammation of the surface of the opposed coils of intestine are not necessarily numerous, strong, or vascular; indeed, it is a matter for surprise to find so little change in the normal condition of the parts in many cases.

The question of the formation of hernia after incision for appendix abscess is not now under consideration. If hernia

does form it should be subjected to operation, when, if the appendix has not been taken away, removal can be done through the old scar and the opening closed. I was able to do this for a girl, aged 14 years, admitted to St. Thomas's Hospital in 1901 for hernia after abscess. The appendix was in a condition of chronic catarrh.

Harley-street, W.

IZAL IN THE TREATMENT OF PHTHISIS.

BY F. W. TUNNICLIFFE, M.D., M.R.C.P. LOND.,
PROFESSOR OF MATERIA MEDICA AND PHARMACOLOGY IN KING'S COLLEGE, LONDON; ASSISTANT PHYSICIAN TO THE NORTH LONDON HOSPITAL FOR DISEASES OF THE CHEST AND THE VICTORIA HOSPITAL FOR CHILDREN.

AT the present time any treatment of consumption other than fresh air and forced feeding is apt to receive but scanty attention at the hands of the profession. The reasons for this paper are two-fold. Firstly, I am convinced that the treatment of certain cases of phthisis by antiseptics is productive of excellent results; and, secondly, there can be no objection to the use of drugs in combination with general hygienic treatment. At a recent International Congress on Tuberculosis at Berlin the exact position of drugs was well defined by Professor Kobert. Speaking from the fulness of his experience at Görbersdorf he said: "The fact that we possess no specific remedy in phthisis is far from the same thing as not possessing any useful drug. We possess no specific climate in phthisis but many useful ones." Nowadays it seems also fashionable to lay the chief stress in phthisis upon those drugs which exert a beneficial influence upon the digestive functions, even those acting on the pulmonary secretions being regarded as of secondary importance. This is presumably with a view of increasing the stock of energy (using this term in the physical sense) at the patient's command. A little oil often saves a good deal of coal. Truly an increase in assimilated food means an increased intake of energy. The effort necessary to expectorate a lump of sticky phlegm uses up, however, many calories. By making the phlegm less, or less sticky, by the exhibition of a suitable antiseptic or expectorant, the effort could have been lessened and thus energy saved. In this latter case, even had less nourishment been taken previously, the balance of energy remaining with the patient after the effort might well be greater than the one accruing in the case of the richer in-take. That we can cure early cases of phthisis without the use of any drug at all is undoubtedly true, but such a cure must be regarded as a *tour de force*, and is neither more nor less interesting than the sole use by a microscopist of a microscope made by himself.

Experiments made upon the tubercle bacillus with izal[1] have shown that in appropriate quantities it renders this organism incapable of producing either local or general tuberculosis when injected into animals. There have been further numerous experiments showing its antiseptic action *in vitro*.[2] This, however, is not sufficient to justify the physician in prescribing it in phthisis. The probability of the usefulness of an antiseptic *in vivo* depends, as Bouchard[3] has shown, not only upon its antiseptic power but upon the relation of this to its toxicity—i.e., upon its "*equivalent toxique*." The antiseptic power of izal is relatively high and its toxicity is relatively low. An exhaustive series of experiments[4] on the pharmacology of izal have shown that this substance in appropriate doses exerts no injurious action upon the higher animals. It has also been shown elsewhere that izal when introduced into the alimentary tract exerts there its specific antiseptic action and can be demonstrated in the fæces. It has been further shown that one of its paths of excretion is the pulmonary mucous membrane, and it was inferred that it would exert there its antiseptic action. These experiments fixed provisionally the dose of the pure izal medical oil at about 10 minims. The following observations must be regarded as the clinical adaptation of the above pharmacological facts.

The izal was administered to the patients in two forms simultaneously. Capsules containing from 2 to 10 minims of izal oil with about five minims of cod-liver oil were given by the mouth after meals twice a day. At first one capsule was given—i.e., five minims of izal oil after dinner and supper—the dose was then increased to three capsules a day, and so on. More than 15 minims of izal oil per diem, was, however, never given. At first some of the patients complained that they tasted the drug for some time after swallowing it, but this soon passed off. One day's pause in four was always allowed from the treatment. The patient was directed further to sleep with an izal lamp burning all night by the side of his bed. By this means he breathed during the night air charged with izal vapour. This is rendered possible by means of a special lamp which consists essentially of a night-light burning under a tray containing izal. In all cases the izal treatment was adopted in addition to the so-called hygienic treatment. The patients were with a few exceptions the better-class out-patients of a London chest hospital. The observations extended over two summers and almost two winters. Patients having evening temperatures of over 100·5° F. were told to stay in bed, with the windows open, or to rest in the open air. They were all enjoined to take as much milk and digestible food as they could. In no case, however, was any form of morphia given or any expectorant or so-called gastric tonic. The shortest time during which a patient undergoing the izal treatment was kept under observation was 12 weeks. The cases will be divided into classes.

The first class was formed of early cases with a history of, and a tendency to, hæmorrhage, but without fever. The physical signs in these cases were confined to crepitations at one or both apices with increased expiratory and diminished inspiratory murmur. The symptoms complained of were dry hacking cough, scanty blood-stained phlegm, loss of flesh, and weakness. In these cases the pulse was usually rapid, from 80 to 120, and the individuals might be described as being of the vaso-motor type. Ten of these patients were treated. At the end of six months six, in whom only one apex was affected, had lost their cough, all expectoration, and had put on from six pounds to one stone. The only physical sign remaining in four of these six was a slightly diminished inspiratory murmur. In the other two cases the inspiratory murmur was still distinctly diminished in the area of lung corresponding to the original seat of the disease. In all six cases tubercle bacilli, originally present, disappeared from the sputum. Of the remaining four patients belonging to this category one, after four weeks, became the subject of a severe hæmoptysis and was treated in the usual manner for six weeks and then resumed the izal treatment. After four months one apex had cleared up but the other still showed marked catarrhal signs. His cough had improved and he had gained weight. He is still under treatment. The remaining three cases were unfortunately only observed for three months. During this time the patients gained weight and improved generally. The physical signs, although much less distinct, had not in this time disappeared. In two of these three cases, at the end of two months and six weeks respectively, the tubercle bacilli had disappeared.

If the effect of the treatment in the above class of case be reviewed it will be seen that izal had a distinct salutary influence on the progress of the arrest of the disease.

The second class of case treated was of a much severer type. It is always a matter of some difficulty to classify cases of phthisis at all as they differ so largely *inter se*. When, however, the effect of some new remedy is being investigated some attempt at classification must be made. The following 15 cases had these features in common: fever, troublesome cough with lumpy purulent expectoration, a considerable area of one or both lungs presenting the physical signs of consolidation, and, in some parts, softening. The microscopic examination of the sputum showed the presence of both tubercle bacilli and pyogenic micrococci. Added to these signs were the more or less marked general symptoms of consumption. These consisted of loss of flesh, night sweats, anorexia, and diarrhœa. This last symptom was with regard to this method of treatment of special interest. In no case, however, was pronounced excavation of lung tissue present and this feature distinguishes this class from the following one. The patients with fever were kept in bed, or at least were

[1] Delépine: Report on the Disinfecting and Antiseptic Properties of Izal. Medical Chronicle, Sept. 4th, 1896.
[2] Klein: Experiments on Izal, 1892. Also Overbeck de Megen. Report on Disinfecting Properties of Izal.
[3] Comptes Rendus, vol. cv., p. 702.
[4] The Pharmacology of Izal, Pharmaceutical Journal, April 18th, 1896.

told to stay in bed, except once a fortnight when they came to the hospital. When the afternoon temperature had remained below 100° for a week they were allowed to get up for the first part of the day, and if the temperature remained down subsequently, for the whole day. There was no difficulty in getting the patients to take their own temperatures and even to keep charts, so, fairly accurate information upon this subject was available. Three of these patients at the end of three months were practically unaffected by the administration of izal oil. Their temperature range was one degree lower than at the beginning. Two of them had gained weight. The remaining one had in this respect remained constant. The cough in all three was somewhat better, but the expectoration remained abundant, thick, and purulent, and the numbers of tubercle bacilli and pyogenic cocci remained, as far as one could tell, approximately constant. The physical signs in the lungs gave but little evidence that the areas of softening or crepitation were appreciably diminished. At the end of three months these patients were treated in a similar manner without izal, and seemed to make rather slower progress. One of them asked to be again put on izal, and this was done with somewhat the same result as before.

The results of the treatment in the case of the 12 remaining patients of this class will now be considered. In six of these the mischief was confined to one lung. These patients were observed for periods varying from four to seven months. In three the evening temperature at the beginning of the treatment ranged from 102° to 101°, in two no higher temperature than 100·8° was observed. In the remaining one there was no complete record of the initial temperatures. When taken in the out-patient room (afternoon) the temperature was 101°. The pulse of these patients was about 110. They were all losing weight. Two had typical night sweats. One had diarrhœa. This last patient, as he presents an interesting feature, may be discussed first. At the end of four weeks his morning temperature was normal, and the evening temperature had been for a week under 100°. He had gained two pounds, his pulse in the out-patient room was 90, as against 110 on previous visits, and the diarrhœa had practically ceased. When he first came his diarrhœa, which had been bad for six weeks and had existed for five months, was a very prominent feature of the case. In some earlier experiments I made with izal I found this drug to be remarkably potent in controlling intestinal putrefaction. This was evidenced by the cessation under its influence of the diarrhœa in several cases of infantile diarrhœa in the summer. Directly after the administration of the drug a diminution of the ethereal sulphates in the urine took place.[1] In the phthisical patient mentioned above there was, when he first came under my care, a large excess in the quantity of ethereal sulphates in the urine. This lead to the conclusion that the diarrhœa was attended with, and probably was accentuated by, fœtid decomposition in the intestine. In addition to this, previous experience of the arrest of phthisical diarrhœa, probably dependent upon the presence of actual tuberculous lesions in the intestine, by guaiacol carbonate, led one to infer that izal would be beneficial in these cases. *A priori* izal should both inhibit putrefactive decomposition and exert its bactericidal action upon the tubercle bacillus *in situ*. The anticipations were fulfilled; after its administration the aromatic sulphates rapidly diminished and the diarrhœa and intestinal discomfort *pari passu* with them. It may here be remarked that unirritating antiseptics are often more efficacious in the treatment of phthisical diarrhœa than so-called astringents. This patient continued under observation for a further period of three months and steadily improved. At the end of this period his evening temperature had for a term of four weeks not exceeded 99°. His cough and expectoration were confined to the early morning. The signs in the lung showed that a small area corresponding to the original softening had become excavated, but that the lung in the immediate neighbourhood had become free from crepitation. There was thus every hope that the disease had become arrested. On two occasions towards the end of the period I failed to find tubercle bacilli in the sputum.

The remaining five cases were similar to the one described above except that the general symptoms were not so severe. The patients all gained weight, practically lost their fever, and regained their working capacity. The cough and expectoration greatly diminished and were practically confined to the early morning. The physical signs in the lung showed in each case amelioration; this consisted, as above, in the area of softening becoming limited and in the disappearance or diminution of the crepitations and the reappearance of a fuller inspiratory murmur over the area which was previously the seat of them.

Six cases still remain to be considered, essentially the same, except that both lungs were affected. In one of these cases the patient who was observed for five months remained practically *in statu quo*. The weight increased slightly (four pounds) and the temperature range diminished, as did also the night sweats from which he suffered, but the physical signs in the lung remained practically the same. The remaining five cases all underwent distinct improvement. With regard to general symptoms the remarks made above concerning the other cases apply to these. The softening in the lung became in each case limited and the physical signs in the area situated between the breaking-down lung tissue and the healthy lung became very much less, or entirely disappeared. So far as concerns the less profoundly affected, lung improvement was observed in several different degrees. In one case the catarrhal signs entirely disappeared from the apex of the slightly attacked lung and full normal breath-sounds took their place. In the other cases the restoration to the normal of the affected area was not so complete. One of these last set of patients had albuminuria (one-tenth Esbach), and it is interesting to note that although he took relatively large doses (10 minims per diem) of izal oil no increase in the albumin took place.

The third class of phthisical patients, treated in the above manner, were in an advanced but chronic state. They numbered 10 in all. The disease was of old standing; in some cases of many years. There were, generally speaking, a large cavity with smaller ones and considerable cirrhotic change. Abundant crepitation and loud râles were present over extensive areas. The expectoration was very abundant, but varied in character from time to time, frothiness being occasionally more and occasionally less marked. In these patients fever was very rarely present and when it existed it was very slight. They may be roughly defined as being the subjects of old tuberculous lung disease whose symptoms were mostly of the bronchitic or broncho-asthmatic type. The best subdivision of them is the considering apart of those in whom the increased resistance to the circulation through the lungs gave rise to more or less marked derangement of the general circulation. This was distinctly present in four cases and was evidenced by cardiac dilatation, œdema of the ankles, and, in addition to these signs, in two, by the presence of albumin in the urine. Besides the two methods of administering izal mentioned above in these cases a third was used. This consisted in either suspending the izal medical oil by means of paroleine and using it for inhalation in a modified spray apparatus, or simply placing a few drops of izal in an ordinary metal inhaler and directing the patient to wear this as often as possible.

In one of these 10 cases the patient did not seem able to get used to the taste of izal and it was, after four weeks, discontinued. In three other cases, although the condition of the patients improved, at the end of four months the physical signs in the lungs did not give any marked evidence of amelioration. In the remaining six cases the increase in weight was marked, from 7 to 14 pounds in five months. The expectoration was very much diminished and very much less purulent, the cough was less frequent and less severe. The physical signs in the lungs showed that during the treatment the pulmonary cavities secreted less. Further, the loud râles for the most part disappeared and the areas of crepitations became distinctly less extensive. With regard to the severity of the coughing fits it is of interest that this became less severe, apart from the diminished quantity of expectoration. A hyper-sensibility of the bronchioles is probably answerable for some of the severity of the coughing fits in this class of patient, apart from the stickiness of the secretion. This is generally treated by substances the active principles of which exert a paralysing action upon unstriped muscular tissue, such, for instance, as belladonna. Izal exerts a slight paralysing action both upon sensory nerve-endings and also upon motor nerve-endings supplying involuntary muscle. This property of it probably explains its beneficial action in the above regard. So far as concerns the treatment by izal the patients with circulatory trouble were not to be distinguished from the others. The article referred to above upon the pharmacology of izal established

[1] Neubauer und Vogel: Analyse des Harns, Wiesbaden, 1898, p. 13.

the fact that it exerted practically no action upon the circulation.

The fourth class of case treated in the above manner is numerically small—it consists only of two patients. Each of these patients had a large foul cavity at the base of the left lung. It probably in both cases arose from a localised breaking-down after pneumonia. Both the patients gave a history of pneumonia over the area in question. The expectoration was greenish, abundant, and very offensive. No tubercle bacilli were found in it. In each case there was slight evening pyrexia (about 99·5°) and in one case peptonuria. In these two cases the izal was administered in three different ways—viz., by inhalation two or three times a day, by means of the izal lamp at night, and by the mouth. The patients were observed for six months and are still continuing the treatment. In both cases during this time a considerable improvement has taken place. At first the expectoration was somewhat increased in quantity, but almost immediately after the administration of the antiseptic it became less fœtid and the putrefactive organisms became less numerous. This was followed by an actual diminution in its quantity which has continued up to the present time. *Pari passu* with this return to a more healthy type and diminution in the quantity of the expectoration, an amelioration in the general condition took place. The slight fever disappeared, as did also, in the one case, the peptonuria.

Summarising the foregoing results it may be said that so long as the individual differences in cases of phthisis remain so manifold, so long must we greet any addition to our non-irritating antiseptics with thankfulness. Of the efficacy of carbonate of guaiacol in certain cases nobody with any experience of it can have any reasonable doubt. The expense, however, of a prolonged treatment with this drug in many cases absolutely contra-indicates it. In spite of many requests from the profession the makers have been unable to reduce materially its price. Some few years ago, in conjunction with Dr. T. H. Arnold Chaplin,[6] the author introduced guaiacolate of piperidine in phthisis, but this, although possessing certain advantages, is also necessarily relatively expensive. In izal we appear to have a cheap and efficacious drug. The best results are to be obtained with it in cases of active pulmonary tuberculosis and of old cavities with abundant fœtid expectoration. According to my experience it seems to exert a beneficial influence in cases in which diarrhœa is present, whether this be due merely to decomposition of the intestinal contents or to actual tuberculous lesion of the intestine. In those cases in which the bronchitic element is well marked it is, as was *a priori* to be expected, less useful.

OBSERVATIONS ON THE NATURE AND TREATMENT OF PERNICIOUS ANÆMIA.[1]

BY ALEXANDER McPHEDRAN, M.B.,
PROFESSOR OF MEDICINE, UNIVERSITY OF TORONTO, CANADA.

MANY causes and conditions have been adduced to account for the occurrence of pernicious anæmia, but none of them is satisfactory—nothing definite is known as to the actual cause. This unknown factor is generally believed to be a toxin; on this theory only can the phenomena be accounted for. Among the English-speaking profession generally the toxin is looked upon as of gastro-intestinal origin and that it acts on the blood of the portal system especially, causing rapid hæmolysis, and that the other effects produced are secondary, developing in the course of the disease. Many German physicians, on the other hand, refer the disease to a toxin affecting hæmogenesis, as shown by the abundance of myeloblasts in the bone-marrow and in the blood, indicating a reversion to the embryonal type. It is probable that both views are in part correct; that not only blood destruction but blood formation has been affected by a common toxæmia resulting in the genesis of abnormal corpuscles and the rapid destruction of the less resistant ones. The blood formation is atypical, and therefore to be attributed to pathological irritation rather than to excessive physiological stimulation. The other changes met with, especially those in the spinal cord and peripheral nerves, are probably produced by the action of the same irritant, rather than as the result of the protracted anæmia. The irregular course of the disease, with its remissions and exacerbations, its irregular fever, the frequent disturbance of the mental condition, and the occurrence from time to time of vomiting and diarrhœa, all indicate a common toxic cause.

The fact that the general condition does not bear a definite relationship to the blood state goes to show that there is something else than the poverty in corpuscles on which it depends. This is well illustrated by the contrast between the condition of a miller who was able to do without difficulty all but the heaviest work of his mill and yet his blood had only 1,000,000 red corpuscles per cubic millimetre, and that of a physician with over 4,000,000 corpuscles whose case is given in detail under the head of treatment. In the case of a member of the Canadian House of Commons during the past year there have never been more than 3,500,000 red corpuscles per cubic millimetre, and yet he has not only regularly and with marked ability attended to his duties in the House but has also conducted a most vigorous election campaign without either exhaustion or detriment. It is to be noted that in these as in all cases during well-marked remissions the colour index is always near the normal, and that the corpuscles show less deformity and there are fewer nucleated ones among them.

That the condition is a toxæmia is further indicated by the early occurrence of marked weakness. This, in most cases, is the first symptom and it may be complained of a considerable time before the pallor is observed. It must therefore be independent of the anæmia to which, as already stated, it is not proportional. In 22 cases observed during the last three years with scarcely an exception the first deviation from health noticed was the weakness; pallor followed soon afterwards. It is to be observed, also, that the early occurrence of weakness, before, as a rule, any disturbance of the digestive tract is noted, does not support the theory that the toxin is of gastro-enteric origin or that the digestion tract is the site of infection, but rather indicates that the changes in it are secondary to the toxæmia. The disturbances of the stomach and bowels doubtless, however, increase the toxæmia and therefore aggravate the condition.

The ground for the opinion that the toxin is of gastro-enteric origin is the constancy with which disease or disturbance of the function of the digestive tract occurs. Few, if any, cases are met with in which there is not at some time a history of diarrhœa and vomiting. In my 22 cases diarrhœa and vomiting occurred practically in all of them at some period of the disease, usually early, but sometimes later. The post-mortem conditions, however, found in the relatively few cases examined do not afford much support to the theory, as in most of them all that has been found is atrophy of the gastric mucosa. Atrophy, however, occurs in gastric carcinoma and many other conditions which have shown no signs of pernicious anæmia, and then there is wanting evidence that the atrophy is not a late change in the disease. The only evidence of its early occurrence is the absence of free hydrochloric acid from the gastric secretion, but free hydrochloric acid is temporarily, and occasionally permanently, absent in many other conditions. During the remissions in pernicious anæmia the appetite and digestion are often quite vigorous and a full diet may be as well disposed of as in health. At such times there is every evidence of a secretion of hydrochloric acid. Even in malignant pyloric obstruction hydrochloric acid may be restored to the secretion after the condition has been relieved by gastro-enterostomy.

Of late much importance has been attached to the probability of infection of the stomach by secretion from diseased gums around decayed teeth.[2] There is no doubt that such unhealthy conditions of the mouth may cause gastric catarrh, but that is far from proving it, even indirectly, to be a cause of pernicious anæmia. It is a question whether decayed teeth and diseased gums are found to exist in pernicious anæmia in a greater proportion of cases than in other chronic exhausting diseases. There is such a vast army of people whose teeth are decayed and whose gums are unhealthy that it would require a marked connexion between the condition of the mouth and any constitutional disease to establish a relationship of cause and effect even in a remote degree. In my 22 cases I have notes of the condition of the mouth in 17: one or more teeth were

[6] Brit. Med. Jour., Jan. 16th, 1896.

[1] A paper read at the meeting of the Association of American Physicians, Washington, on May 1st, 1901.

[2] William Hunter: THE LANCET, Jan. 27th, 1900, p. 221.

carious in 10 of these, but nearly all of them were too well cared for to be a possible source of infection of the stomach. In only four of these cases were the gums unhealthy, three of them being only slightly affected and the fourth only fairly severely. In none was there a purulent secretion. It is further to be observed that these cases were not more affected by stomatitis or gastro-intestinal disturbances than were those whose teeth and gums were perfectly healthy.

One case at present showing very grave symptoms of pernicious anæmia was under treatment two years for dilatation and prolapse of the stomach with marked disturbance of its function. The patient was then quite thin and anæmic, but the blood did not present the characters of pernicious anæmia and she made a very good recovery. Her present illness began during the past winter. There was a history of pernicious anæmia in the family of two of my cases. One of them, a young man, whose death is just reported, had a brother who died from the same disease about four years ago. The history was typical, so that there can be no doubt as to the diagnosis. The other case is that of a lady about 70 years old. She had been ailing for nearly two years and presented the characteristic symptoms in a marked degree. Two of her brothers died a few years ago from a disease with similar symptoms and history.

Symptoms of the disease of the nervous system occurred in nine of the 22 cases. In most of them there were only slight feelings of numbness in the extremities, the hands chiefly. In the case of a physician to whom I shall presently refer, not only the numbness, but ataxia, was quite marked, and the mind was not quite vigorous and clear even during his remissions, in some of which he was almost well. In the case of a lady, aged 68 years, there was a sensation of extreme coldness in the hands that was distressingly painful at times. In her case numbness was also marked. Severe neuralgia of the head in all parts, but usually affecting one side more than the other, was the form which the nerve symptoms took in a young woman. The pain could scarcely be relieved, until a remission of all the symptoms occurred when she recovered fair health for a time; a relapse followed and terminated fatally six months later. Of the 22 cases 16 were males, an unusually large proportion. They were from all walks in life, but none were subject to undue privation or burdened with excessive work or "carking" care. In no case was any apparent cause evident.

In estimating the value of the treatment in any disease it is necessary to take due account of its natural course. This is especially true of pernicious anæmia, the course of which is subject to such sudden and extreme changes. There are few diseases in which more marked remissions occur. It is not unusual for patients almost moribund to be about in a few days and to resume work in a few weeks. This was the history in the case of a man who had been ailing for some months, and in April, 1900, was so prostrate that he could not be roused; blood-stained fluid flowed from his mouth saturating his pillow. Yet in a few days he was sitting up, and returned to his home within a week, a distance of 100 miles. During the summer he considered himself well and worked at his trade as a stonemason. He relapsed in the autumn and spent the winter in-doors with hopes of improving with the advent of the warm weather, but he grew worse rather suddenly and died in April, 1901. Another man, under my care at the same time, in his first attack two years before was so prostrate that his physician told him that he would not be able to return to his office for a year; but he was there in two weeks, and continued well, as he thought, for a year when he relapsed, failing steadily with the usual exacerbations and remissions, until he died six months later. Such cases as these show the inappropriateness of the name "progressive" pernicious anæmia. The disease is *remittent* not *progressive*. Many cases run a milder and more persistent course, but in these also remissions occur and from time to time give promise of recovery. As in the case of the Member of the House of Commons already referred to, the recovery may be almost complete and remain unchanged for a year or more, but examination of the blood always shows some characteristic deviations, and a relapse may be confidently expected sooner or later. This has been my experience with the 22 cases observed during the last three years. Of these 14 patients have died, four are running the usual variable course, and the remaining four have not been heard from for some time.

Arsenic, since its introduction by Bramwell, has until recently been regarded as a specific in pernicious anæmia. As the natural history of the disease has become better understood confidence in it has gradually lessened until now many regard it as of little value. The only case of complete recovery which I have had was apparently due to its action.[3] The case was that of a patient who in 1889 presented all the characters of pernicious anæmia with acute symptoms. The red corpuscles were reduced to 750,000 per cubic millimetre and there was marked poikilocytosis with much variety in size. Histological examination of the blood was not then further made. He took arsenic very freely for three months causing considerable peripheral neuritis. His recovery was complete and he has since remained well. In the light of my more recent experience I am inclined to doubt the diagnosis, although it is not apparent wherein the error lies. In none of my late cases has arsenic proved of any service. In many of them it soon caused gastric irritation and had to be discontinued.

The general acceptance of the theory of gastro-intestinal toxæmia has led naturally to the use of various antiseptics. Of these bi-chloride of mercury has been most generally used, both locally as a mouth-wash as well as internally. My experience with it unfortunately has not been satisfactory; no tangible good has resulted from its use. The use of other antiseptics as salol, resorcin, creasote, bismuth salicylate, and bismuth naphtholate has been equally ineffective. Should this plan of treatment after due trial prove unavailing it will go far to show that the theory of the origin of the disease from a gastro-intestinal toxin is incorrect.

With a view of supplying the blood with an artificial serum and stimulating lymphagogue action and excretion of toxin by the kidney I have given normal saline subcutaneously in a few cases. I first gave it to an old man in the Toronto General Hospital who was so prostrate as to be almost unconscious. After the first injection of a pint he roused up and remained much better. A pint was given every second day and on the alternate days the same amount was given by the rectum. The subcutaneous injection was so painful that on recovering his normal mental state he declined to continue its use and the saline enemata soon caused diarrhœa and had therefore to be stopped. He improved very much and left the hospital in very fair condition with over 3,500,000 corpuscles per cubic millimetre. He returned four months later in a relapse and died in a few days. In a few other cases improvement followed the subcutaneous saline and in one there was apparently a recovery, but he may have relapsed as he has not been heard of for some time. It is, unfortunately, too painful for most people to endure. The rectal administration should be as effective, but it cannot be continued on account of the diarrhœa.

If, as Rumpf[4] has lately pointed out, there is, in addition to the hydræmic state of the blood, an excessive quantity of sodium chloride present, it would seem injudicious to add more water and chloride of sodium to blood already surcharged with these constituents. If, however, the solution stimulates the renal secretion its use may so increase elimination from the blood as more than to counter-balance the evil effects of the introduction of more chloride of sodium and water into the blood.

The use of various other sera is illustrated by the history of the case of the physician to whom I have already referred. He was 50 years of age and practised in a neighbouring city. Symptoms of weakness were noticed early in 1899 and pallor shortly afterwards. His teeth and gums were healthy but he suffered much from stomatitis, especially when his stomach was disturbed, as it was frequently. He could take arsenic only for a few days, as it caused nausea and vomiting, and normal saline by the bowel set up diarrhœa. Bi-chloride of mercury was used for some time, both locally for the mouth and internally for the general toxic condition, without doing appreciable good. Bismuth salicylate and similar antiseptics were given from time to time for the diarrhœa which always recurred when the stomach was disturbed. His history was the usual one of mild exacerbations and remissions. Plain horse serum was then given subcutaneously in the hope of stimulating lymphatic action, but the only effect was to produce a severe urticaria. This was also the result of its use in three other cases. Then anti-diphtheritic serum was used, two cubic centimetres being given every second day. Its use in two previous cases had been followed by gratifying results, doubtless *post hoc* rather than *propter hoc*. The patients

[3] Philadelphia Medical News, 1890, p. 367.

[4] Berliner Klinische Wochenschrift, No. 17, 1901. Abstracted in American Medicine, vol. i., No. 9.

were both old men and one of them died in the following year from acute diarrhœa, the other two years later from senility. In the physician's case the serum had no apparent effect, nor had it in three other cases in which it was subsequently used. During June anti-streptococcic serum was used, five cubic centimetres being given every two or three days at first and later 10 cubic centimetres; in all 125 cubic centimetres were used. During this time the temperature varied from 99·2° to 100·6° F. Some time after beginning the use of serum, after each injection a free secretion of saliva occurred which was sometimes blood-stained. No apparent benefit followed the use of the serum. The patient spent the summer of 1900 under most favourable conditions, living out of doors all day and sleeping in a tent at night. During the remissions the appetite was good and his diet was highly nutritious. By September he was considerably better but still his blood only contained about 3,500,000 red corpuscles per cubic millimetre. In October, on my advice, he tried spermin (Poehl), 10 cubic centimetres being given in divided doses extending over 10 days. He soon began to improve and during November his blood contained 4,500,000 corpuscles per cubic millimetre and the hæmoglobin rose to 85 (Fleishl). He looked quite well and said he felt as well as ever; the corpuscles, however, showed considerable inequality in size and a few nucleated ones could be found. He resumed his practice in a quiet way, but soon found himself unequal to the work. He became depressed; his mental condition which had been affected early in his illness and was not completely restored even at his periods of greatest improvement, now became so much disturbed that he became difficult to nurse. He was confined to bed although the blood showed only moderate deterioration, and in January, 1901, he grew suddenly worse and died comatose.

In more recent cases I have advised moderate purgation, with the object of removing infective material from the bowel. At the same time intestinal antiseptics have been given, and such general remedies as strychnine, arsenic, iron, bone-marrow, and the like. The results, however, have been no less disappointing than former experiences. Notwithstanding all the good work that has been done the cause and pathology of the disease are as yet quite unknown, and as to its effective treatment we are equally in the dark. No plan of management or treatment so far devised avails to cure the disease or even, in most cases at least, to alter its erratic course. Before the recovery can be considered complete the blood on histological examination must be found quite normal. A restoration of even the full complement of 5,000,000 red corpuscles per cubic millimetre is not sufficient, as that may occur in a prolonged and marked remission. Not a few of the cures reported have doubtless been remissions of this kind.

Toronto.

FRIEDREICH'S ATAXIA.[1]

BY GUTHRIE RANKIN, M.D. GLASG., M.R.C.P. LOND.,
PHYSICIAN TO THE DREADNOUGHT HOSPITAL, GREENWICH, S.E.; ASSISTANT PHYSICIAN TO THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO-ROAD, S.E.

FRIEDREICH'S ataxia is a sufficiently rare disease to make a group of cases such as the following worthy of detailed record. The patients are three sisters, aged respectively 20 years, 18 years, and 11 years, who belong to a family of four, the remaining member being a boy, aged 16 years, whose general health is reported to be excellent, but who is afflicted with stammering of a pronounced degree. The only point of importance in connexion with the family history is that the parents are first cousins. So far as can be ascertained there is no reason to suspect alcoholism or syphilis in either father or mother.

CASE 1.—The eldest of these three girls (Fig. 1) came to the out-patient room at the Royal Hospital for Children and Women some time ago complaining of gradually increasing loss of power in her legs, on account of which she had latterly found it a matter of considerable difficulty to get upstairs. She had always been perfectly well in her general health, but at the age of 12 years she first observed that her legs were becoming feeble. There was no wasting of the limbs, no history of previous acute illness, and no sensory disturbance. She had several chronic sores on her feet to which she attributed her difficulty in locomotion and the feeling of weariness in her legs. This history led to an examination of the patient's feet, and their appearance at once suggested the nature of her malady and prompted inquiries as to the health of other members of her family. Both feet presented the characteristic deformity of Friedreich's disease, being foreshortened with abnormally high instep arch and acute extension of the phalanges on the metatarsal bones (Fig. 2). The sores she complained of were numerous; a few superficial, others deep, and with some of the features of perforating ulcer. The soles were tender to the touch, and partly because of this tenderness—wholly, as the patient thought—and partly also, no doubt, from the deformity and muscular debility, she was unable to walk across the floor on bare feet. The girl then explained that she required to wear specially made boots to enable her to get about at all, but that with them she could manage pretty well so long as she was not required to do much in the way of going upstairs. This point, which to the girl is one of the striking features of her case, is noteworthy as prominently emphasising the fact that the flexor muscles of the leg are those which become specially impaired in the early stages of the disease. Her gait is more reeling than ataxic in character. This is brought out if she is asked to turn sharply round, when it will be observed that her efforts at movement are attended by a certain amount of shakiness. She walks with her toes turned inwards and with her legs widely apart. Romberg's symptom is well marked and she complains of attacks of vertigo which are always liable to be induced by closing her eyes when she is in the erect position. Her knee-jerks are absent and the plantar reflexes, though not abolished, are feeble. There is loss of motor power in both legs, but especially in the left, which she is quite unable to raise from the ground against the opposition of the most moderate pressure. Her arms are slightly ataxic, but not yet to such an extent as to interfere with her daily duties. There is no nystagmus and her eye-movements are normal. The optic discs are healthy and the pupils are equal and react freely both to light and to accommodation. Her speech is unimpaired and she is mentally bright and active. A fine tremor is to be noted throughout her muscles whenever they are put into use, and this is specially observable in the face, where sustained muscular tension, such as that required by the upper lip when called upon to uncover the teeth and gums, brings about, not only tremor, but after a few moments clonic contractions of the levator labii superioris, orbicularis oris, and other small circum-oral muscles. There is nothing abnormal about any internal organ, but her menstruation is somewhat irregular as to periodicity and is scanty. She suffers from pronounced ichthyosis, so that the congenital imperfection is not limited to the spinal cord, but implicates the skin as well.

The facts of the case leave little doubt as to the diagnosis, but full confirmation is afforded by the condition of the patient's two sisters.

CASE 2.—The elder of the two, aged 18 years, at once attracts attention on entering the room by her apathetic and almost vacant expression. Her gait is more shuffling but less ataxic than her sister's, and her speech is slurring, deliberate, and produced by a voice almost wholly wanting in both animation and inflection. She, too, enjoyed perfect health till the age of 12 years and her first abnormal sign was (precisely like her sister's) a difficulty in getting upstairs from feebleness of her leg-muscles. On examination she is found to possess the same foot-deformity (Fig. 4) but without any plantar sores, the same absence of knee-jerks, and, in fact, a replica of the sister's symptoms, but with the important addition of a marked curvature of the upper part of her spine (Fig. 3). The loss of power in her legs is not yet so far advanced as in her sister's case, but, on the other hand, on extreme conjugate deviation the eyes manifest oscillating movements which are not sufficiently sustained to be dignified with the name of nystagmus, but are still nystagmoid in character and in all probability represent the early stage of that condition. In her case tremor on movement is a well-marked feature and on watching her attentively for a little while one observes occasional choreiform twitchings which seem to be confined to the right arm and face. Her skin is normal and there is no impairment of her general health or evidence of disease in any thoracic or abdominal organ.

[1] A clinical demonstration at the Medical Graduates' College and Polyclinic on July 2nd, 1901.

CASE 3.—The patient in this case—the youngest of the three girls—is 11 years of age and is supposed to be perfectly well, but on examination she presents three very suggestive symptoms. The great toe on each foot is hyper-extended and the extensor proprius pollicis stands out with undue prominence (Fig. 6); the knee-jerks, though not wholly absent, are so feeble that they can only be mildly elicited on reinforcement; and the small muscles of the face are distinctly tremulous when they are called upon to exert their full vigour. The girl is robust and energetic, she has experienced no muscular weakness, vertigo, or ataxia, and is, so far as she knows and to all superficial appearance, in the enjoyment

FIG. 1.

Showing condition of the back (no curvature) in Case 1.

FIG. 2.

Showing condition of the feet in Case 1.

FIG. 3.

Showing condition of the back (spinal curvature) in Case 2.

FIG. 4.

Showing condition of the feet in Case 2.

of perfect health. It is of special importance to note that she has not yet reached the age at which both her elder sisters first began to droop, because it has become one of the

FIG. 5.

Showing condition of the back in Case 3.

FIG. 6.

Showing condition of the feet in Case 3.

recognised tendencies of the disease to manifest itself at the same age in members of the same family—so much so that one of the most favourable of all prognostic facts is the absence of symptoms after the age of incidence has been passed.

Though the disease has not reached its full development in either of these girls the three cases taken together portray in unmistakeable colours the picture first painted by Friedreich. The absence of certain phenomena, such as well-marked nystagmus, pronounced ataxia of the upper arms, emotional instability, &c., is to be explained by the comparatively short time during which the disease has been in progress. It is, of all nerve disorders, one of the slowest. Many important symptoms, therefore, remain to declare themselves in process of time, and already in these present cases a certain amount of evidence is forthcoming that the advent of some of them will not be long delayed.

The photographs in the accompanying illustrations have not succeeded in bringing out as well as they might have done the deformities of the feet and back, but they illustrate clearly enough some abnormal features and have been taken with a view to future comparison. The attitude and shape of the feet are, in all three cases, already striking. There is no marked curvature of the spine to be seen when the back of the patient in Case 1 is examined, but the photograph fails altogether to portray the bend which is strikingly in evidence in Case 2, and only imperfectly reproduces the slighter, but still undoubted, curvature which the youngest girl (Case 3) presents.

Friedreich's ataxia is essentially a family, as distinguished from a hereditary, disease; it attacks several members of the same family or generation, isolated cases being comparatively rare. Obviously it can seldom be a directly hereditary disease, because in the vast majority of cases it is so far advanced before the marriageable age is reached that a matrimonial alliance is out of the question, not necessarily from actual sexual incapacity, but on account of the helplessness and crippling which have been already by that time produced. There is nothing definitely known as to the etiology of the disease beyond its dependence upon congenital conditions of the spinal cord. It has been variously ascribed to alcoholic excess in one or both parents, to syphilis, to parental consanguinity, and to preceding acute febrile disorders—such as measles or scarlet fever. It has also been said to occur with greatest frequency in families of unusual numerical strength. None of these causes are adequately sufficient to explain its occurrence. As regards syphilis, for instance, it is now accepted that it may be definitely excluded as a direct cause, though it may coincidentally exist. The speech defect by which the only son of this family is afflicted goes to confirm the supposition of an unstable inheritance so far as nerve tissues are concerned, and the ichthyotic skin of the eldest daughter (Case 1) further proves a congenital tendency to imperfect development. But no more can be said in favour of consanguinity as a cause than that weaknesses of tissue inheritance are more likely to be intensified in the children of parents who come of the same stock than in those whose ancestry is derived from parents born of entirely different strains.

Pathologically Friedreich's ataxia depends upon a sclerosis of the spinal cord which invades the posterior, lateral, and often, also, the anterior columns. In many cases the cord is smaller than normal, and this deficiency in size may involve the medulla and pons as well as the cord. Cases are recorded in which the cerebellum also has been found atrophied. The sclerosis of the posterior columns is usually complete throughout the whole length of the cord, and that of the lateral columns extends outwards and forwards so as to involve the direct cerebellar and the anterior pyramidal tracts. The cord lesion is thus much more extensive than in ordinary tabes which in many respects the disease so closely resembles. According to some authorities the sclerosis of Friedreich differs intrinsically from all other forms of sclerotic lesion in being purely neuroglial in character.

The two diseases with which Friedreich's ataxia is most liable to be confounded are locomotor ataxia and disseminated sclerosis. It may be distinguished from locomotor ataxia by the age of the patient, the existence of the disease in other members of the family, the altered speech, characteristic foot deformity, tendency to spinal curvature, muscular tremors, and choreiform twitchings, and by the absence of visceral crises, Argyll-Robertson pupils, lightning pains, and other sensory phenomena. If carefully observed the gait also will be found to differ in the two diseases; in tabes it is purely ataxic, whereas in Friedreich's ataxia it partakes of the cerebellar character as well, and thus

becomes a mixture of stamping and reeling. The resemblance to disseminated sclerosis is at first sight considerable. In both affections there are nystagmus, a difficulty in speech, muscular tremor, and an abnormal gait, but on closer investigation it will be found that the nystagmus is more marked and developed at an earlier period of the disease in disseminated sclerosis than in Friedreich's ataxia; that the speech, though slurred and deliberate, is not so syllabic; that the muscular tremor is not rhythmical nor of the unmistakeable intentional type; and that the gait possesses none of the spastic element which characterises the disseminated case. Further and more distinctive points of differentiation are to be found in the facts that disseminated sclerosis is not a family disease; that it very rarely develops in persons under 20 years of age; that it is subject to periods of remission and exacerbation unknown in Friedreich's ataxia; and that the spinal reflexes are exaggerated and the optic discs frequently atrophied. The foot deformity and spinal curvature of Friedreich's disease are not present in disseminated sclerosis.

The prognosis of the disease is, so far as now understood, hopeless. Its progress is usually slow, often lasting over a long period of years, but it is gradually a downhill one, and there is such eventual crippling that the patient is unable to do anything for himself—a helpless condition which sometimes is accentuated by the fact that the speech has become so slurred as to be wholly unintelligible. No remedies have any apparent effect in arresting its course; it goes on steadily, however slowly, from bad to worse in spite of treatment. The most that can be done is to maintain the general health as thoroughly as possible, and this should be accomplished by means of good and abundant food, fresh air, suitable exercise, cod-liver oil, and general tonics. The constant current applied down the length of the spine may be of temporary value, and the use of a well-fitting rigid jacket will help to prevent the excessive development of spinal curvature.

Besham-street, S.W.

REPORT AND COMMENTARY ON SCHOOL SANITATION AND HYGIENE

AS PROVIDED FOR IN THE FOLLOWING FIVE EUROPEAN COUNTRIES—VIZ., FRANCE REPRESENTED BY PARIS, ITALY BY MILAN AND FLORENCE, BELGIUM BY BRUSSELS, GERMANY BY STUTTGART, AND SWITZERLAND BY ZÜRICH.

BY STUART ALEXANDER TIDEY, M.D. LOND.

THE following report, drawn up during a rapid tour of inspection, represents the crystallisation in specific form of one element—viz., school hygiene, from a solution of general knowledge of continental methods of elementary education, acquired during 16 years' residence on the continent at intervals extending over a period of 30 years. To facilitate ready reference and comparison the reports are drawn up in tabular form and this was done in each case immediately after the visit of inspection was made. Thus confusion was avoided and the relative merits and defects were brought into strong relief.

The object of the reports is to afford an accurate appreciation of the work being done at various continental centres towards providing for the physical well-being of school-children educated at free elementary national or municipal schools. No consideration other than that of accuracy has been allowed to influence the compilation of results recorded. Reports on the same subject as treated in various countries must lead to comparisons, and should the comparisons drawn as a necessary part of this review come by any chance to the ken of those in charge of the institutions reviewed it is hoped that they will accept the conclusions as the result of sincere conviction based on a definite scheme of inspection. The selection of towns visited was made with a view to seeing a good, if possible the best, representative centre in each country. Whether this result has been accomplished or not it is impossible to say; possibly Berlin would have been a better representative centre than Stuttgart, and Le Havre than Paris; but accepting the centres visited as representative, the order of relative merit in which they stand in point of provision for elementary free education admits of no uncertain verdict except as to the claims of Belgium and Switzerland for the honour of first place. Together or separately, they excel all rivals in superlative excellence—Switzerland, represented by the town of Zürich, with its palatial school buildings arranged to meet every hygienic requirement, and Belgium, represented by Brussels, with its established structural excellence and highly-organised administrative programme; both marshalled by an energetic and progressive *personnel*, neither content with excellence but seeking perfection; Switzerland, more lavish in structural outlay; Belgium, if possible, more perfect in administrative organisation. Is there in either a determining element of superlative excellence or of essential defect to turn the scale? Yes; and reference to the respective reports will furnish the answer.

Under the head "Ventilation" will be found mentioned in the Swiss report opposite windows facing the lighting windows and opening into the corridor and extraction openings *near the floor* functioning in and out of class hours. In the Belgian report is no mention of opposite windows, and the extraction opening is *near the ceiling*. In relation to this structural difference there is no perceptible vitiation of the air at the end of the Swiss class, but at the end of the Belgian class there is perceptible vitiation of air. The Swiss engineer has provided a double extraction, and that for special function in winter near the floor. He argues thus. In winter the outside air passing over the radiator is heated and rises at once; descending as it cools, it reaches its destination at the level of the heads of the pupils, is not sufficiently heated by respiration to rise again, but finds its way to the extraction shaft by the low opening. In summer the entering air diffuses equally throughout the room, is warmed by respiration, and passes into the corridor or into the open air by the high opposite windows. The Belgian architect says: "The intake air is warmed by passage over the radiator, is breathed by the pupils, and then rises and finds its way by the high aperture to the extraction shaft." One of his premisses is false, by omission, and the conclusion falls to the ground. On this ground, involving as it does the most important hygienic principal—viz., that of proper aeration of the class-rooms—the palm of superiority must be awarded to the Swiss elementary school.

Next, and following close on the heels of the leaders, comes Italy, represented by Milan and glowing with the enthusiasm of the Risorgimento. Here, again, are fine elementary school buildings, well-designed to fulfil the demands of modern science and generously installed. Here also the *personnel* is proud of its schools and still striving to excel. Florence, too, far behind Milan in point of school buildings, has all the potential energy and will to convert her antiquated schools into educational palaces. To quote words recently used by Professor Del Greco: "Questi stabilimenti infelici sono destinati a sparire—a morto." ("These infelicitous buildings are destined to disappear—to death.") But while the Florentine bemoans the destitute circumstances of his seats of learning, he, nevertheless, makes the best use of them. One of the most infelicitous of the schools—viz., that of Salvino del Armato degli Armati—is a pattern of order and cleanliness. Every attempt is made to do good work with bad material. What better warrant of future success? Then the institution for backward children, near Florence, is a model of excellence in point of administration and instruction, though housed in an ancient building.

But to proceed, Germany, as represented by Stuttgart, comes next in order of merit. Here we see established scholastic success enjoying the dignity of recognised merit as the educational school of Europe, the buildings being of substantial structure and simple decorative design and fulfilling the established hygienic rubric. No indication is there of a keen progressive movement, but all is in order and everything established on a solid basis.

Next on the list under review comes France, represented by Paris. Many of the school buildings are of recent construction, but the best are not built to meet modern requirements of school hygiene. There is deficient width of corridors and staircases, the drill-halls have to subserve a variety of purposes, the basement and roof-space are not utilised, the ventilation is defective, and the system of heating is bad, the pupils are adapted to the desks instead

REPORT ON LEGISLATION AND PRACTICE OF SANITATION AND HYGIENE IN ELEMENTARY EDUCATIONAL INSTITUTIONS OF SOME EUROPEAN COUNTRIES.

France.—Paris (population 2,700,000).

Playground and drill-hall.	Building.	Schoolrooms— Area in metres per child.	Height in metres.	Ventilation.	Heating.	Seats and desks.	Latrines.	Physical training.	Hours of work.	Hygienic precautions.	Vaccination.	Number of elementary schools and special institutions.
Playgrounds: small, 700 sq. m. for 450 pupils, gravel or wood pavement; tree-planted. Drill-hall (*Préau*): 25 m. × 8 m. for 450 pupils; used as cloak-room, refectory, and playground, as well as for gymnastics and military drill.	From one-half to two-thirds of the primary municipal school buildings are modern. Some are in fairly open surroundings, others much enclosed. Neither basement nor roof-space is utilised. Corridors and staircases 1½ m. wide. Water on landings and in drill-halls. No bath-rooms.	8 m. × 7 m. for from 47 to 55 pupils. All rooms fully occupied and more space wanted.	4 m.	Windows with moveable pane. Extraction opening in ceiling near chimney. One two-and-a-half inch opening between classroom and corridor. Outside ventilation: openings to spaces between ceiling and floor above. Air in rooms vitiated. Children pale, weak eyes, pimples, &c. No adequate provision for aeration during class.	Temperature 15° C. Iron or terra-cotta stoves which heat air taken from the room. Water-troughs found empty.	Either single, in pairs, or old-fashioned rows of desks. No support to the loins. All the same size in the same room. Part of the seat moveable.	Separate buildings. Open into portable receptacles or town drains; in the latter case self-flushing. Closets arranged for standing position. Arranged so as to be seen into—i.e., walls about 1½ m. high. One closet for 65 pupils; urinals in same proportion.	Daily physical exercises, besides gymnastics, boxing, fencing, and singing.	30 per week including time for manual work, gymnastics, and singing. Intervals between classes. Hours: from 8 to 11 A.M. and from 1 to 4 P.M.—i.e., six hours daily except on Thursday, which is half-holiday.	Cleanliness of person and surroundings. Food either gratuitous or for small payment. Meat, 45 grammes; vegetables, 30 centilitres; soup, 30 centilitres. Summer colonies, some of which are permanent institutions, maintained by arrondissement. Pupils weighed and measured before and after summer outing. Good results. Medical visit every 15 days.	Vaccination and revaccination at 10 years obligatory.	200 boys' schools; 200 girls' schools. Maternal schools for children from two to six years of age attached to several primary schools. Ecoles enfantines intermediate between maternal and primary schools for children of both sexes from four to seven years of age.

Italy.—Milan (population 500,000).

Planted with trees, inclosed by a wall. Fine open spaces but rather crowded when in use—i.e., 36 × 26 m. for 700 pupils. Boys and girls have separate playgrounds. Drill-rooms 9 m. × 17 m. Central steam heat.	Old buildings rapidly giving place to new. The latter of modern construction, well placed and constructed in rectangular blocks or round three sides of a square. Spacious entrance halls, corridors, cloak rooms, &c. Corridors 3 m. wide, with taps and basins if the latter are not in the schoolrooms.	7 m. × 8 m. for from 50 to 60 pupils—i.e., 1 sq. m. per pupil. Generally not fully occupied.	4 +	Windows 3 in number in each long side of the walls. Hopper lights. The air from the outside warmed by passing over encased radiator. Extraction opening near floor to roof 4 sq. dm. to 100 cubic m.	Temperature 13° C. Central steam or air. The former is more dependable. Condensed steam used again for boiler. The radiation apparatus in the rooms and corridors is arranged to heat the incoming air.	Isolated pairs of combined pattern on a ground frame. The seats lift on hinges and fold back; the top of the desk is immovable. Passage between rows of pairs. Four sizes of desks.	The latrines are self-flushing and they open into the town canalisation. They are syphoned and trapped. Sometimes with seat, sometimes without. One closet and one urinal to about 30 pupils. Special models for blind school and for school for defectives.	Special provisions for walking, running, jumping, and singing. Boys of the upper classes have gymnastics once or twice a week.	22 hours per week. Upper classes: from 9.15 to 11.30 A.M., and from 12.30 to 2.45 P.M. Lower classes: from 9.30 to 11.30 A.M., and from 12.30 to 2.45 P.M. The pupils remain all day at school—i.e., do not go home at midday.	At the commencement of each scholastic year a medical examination of all pupils is made, and a report on a special form is presented to the authority. A monthly record is kept (1) of cases absented and re-admitted during the month; (2) of cases absented and not re-admitted; and (3) of those re-admitted from the previous month. In all cases the medical officer orders abstention and re-admission (for infectious diseases). Special provision and instructions for treatment of pediculosis. Cases of declared tuberculosis excluded from school.	Vaccination and revaccination at from 10 to 12 years of age universal. Small-pox unknown in the schools. In the event of one case of small-pox all the class to be revaccinated except such as have been successfully revaccinated within five years.	72 elementary schools (40,000 pupils). One school for deaf-mutes. One school for the blind. Two foundling schools. One school for defectives (*defici enti*). One school for stammerers. Special classes for backward children. Two *educatorii* or family schools for children (from four to 10 or 12 years of age) whose parents are at work.

											Cases of declared tuberculosis excluded from school.	

Italy.—Florence (population 200,000).

In town very limited. In the suburbs 5 sq. m. or more per pupil. Should be: playground 4·5 m. Drill-hall 1·25-1·50 m.	Chiefly adapted; some new. New projects accepted. The law of 1900 is very specific.	Generally less than 1 sq. m. Should be: kindergarten, 0·80 sq. m.; elementary schools, 1 sq. m; secondary schools, 1·25 sq. m.	4·50; often more. Rule: 4·50 at sea-level; 4·00 at an altitude of from 500 to 800 m.; 3·50 at higher altitudes.	Window-frame divided. Upper part: one median pane on horizontal axis; lower part opens vertically in the middle. High windows in opposite wall. Openings to the outside near the floor with radiators. The law is more exacting.	None, except in kindergarten.	For kindergarten a combined seat and desk with canvas hammock and pillow for sleeping which hangs over the back of the seat when not in use. For elementary schools, G. Bini's combined chair and desk on ground frame. Six sizes. The desks slope. Backs to support the loins. The seat tips back on a hinge when the pupil stands. The foot-rests are moveable for cleaning the floor. The desks are in pairs.	Pedestals, without wooden seats or merely two slightly raised foot-pieces at the side of the aperture. The latter leads direct into the cesspool; some cesspools are ventilated. One latrine per 50 pupils. The new law requires syphons, traps, flushing-cisterns, and ventilation shafts, but only one latrine for 50 pupils, male or female.	Boys: half an hour daily and bigger boys gymnastics twice a week. Girls: half an hour twice a week. Project for swimming-bath.	22 hours per week—arrive from 8.30 to 9 A.M.; lessons from 9 to 10.30 A.M.; rest from 10.30 to 11 A.M.; lessons from 11 to 12 A.M.; lunch from 12 A.M. to 1 P.M.; work from 1 to 2 P.M. Girls do sewing, &c., in the afternoon and leave off at 2.30. The pupils do not go home at mid-day.	Notices against spitting. A table of contagious and infectious diseases in each director's room. Suspected cases kept away. Periodical cleanings and ventilation by open windows.	Certificate in all cases. After the lapse of 10 years' revaccination. In the event of one case of small-pox all in the class who have not been vaccinated within five years to be revaccinated. In the event of two cases in the class all are to be revaccinated.	38 elementary schools, two kindergarten, one school for the blind, two schools for deaf-mutes, one institution for backward children, imbeciles, and epileptics, and one institution for illegitimate children and foundlings.

Belgium.—Brussels (population 200,000—town only).

The playgrounds, about 1000 square metres, paved with bricks sloping to the centre or gravelled and tree-planted. They contain paved and glazed receptacles for excreta, which are flushed periodically from an automatic tank. "Tout à l'Egout."	Mostly modern and made on the same model—viz., central covered hall (*préau*) 45 m. × 15 m.	1·4 sq. m.	4·5 m.	Guillotine windows, opening at top and bottom. External openings behind radiator. Extraction openings 40 cm. × 45 cm. near the ceiling for a room 7 × 8 × 4·5 m. Shafts of these open into the roof-space.	Temperature 16° C. Central steam or stoves. The former with radiators placed in front of the air intake. The stoves in a similar position, and in the corner diagonally opposite extraction aperture.	Combined seat and desk designed by Mr. Ramaekers, after study of essentials and of recognised patterns. The seats and desk-lids are immoveable; the former are small so as to facilitate entrance and exit. Seven sizes. Each isolated pair on platform raised about 10 cm. from the ground.	Periodical self-flushing pedestals for sitting position; head and feet visible. One for 50 boys or 25 girls; separate buildings.	Physical exercises by teachers half an hour daily. Bar-bells, dumb-bells, Indian clubs, gymnastics, walks, swimming, singing, and manual work.	30 hours per week, including those for all physical exercises, gymnastics, and baths. From 8.30 to 11.30 A.M., with a quarter of an hour interval, and from 1.45 to 4 P.M., with a quarter of an hour interval. From the age of six years onwards.	Instruction to masters and pupils by medical officer. Nourishment at midday when required. Cod-liver oil or poudre zootrophique. A pamphlet is given to each member of the *personnel* on infectious diseases. Dental department. Bath and douche once a week. Summer colonies. Pamphlet of advice to mothers. Medical visit every 10 days.	Obligatory for admission to school.	Eight boys schools, eight girls' schools, and three boys and girls' schools. About 800 children in each school, 13,000 in all. Not more than 40 per class. One school for backward and unruly children. One school for the blind, subsidised by the town. One school for the deaf and dumb, also subsidised. Thirteen kindergarten of 200 each for children from three to six years of age. Five new elementary schools projected. School attendance not obligatory.

REPORT ON LEGISLATION AND PRACTICE OF SANITATION AND HYGIENE IN ELEMENTARY EDUCATIONAL INSTITUTIONS OF SOME EUROPEAN COUNTRIES—*(Continued)*.

Germany.—Stuttgart (population 170,000).

Playground and drill-hall.	Building.	Schoolrooms— Area in metres per child.	Schoolrooms— Height in metres.	Schoolrooms— Ventilation.	Schoolrooms— Heating.	Seats and desks.	Latrines.	Physical training.	Hours of work.	Hygienic precautions.	Vaccination.	Number of elementary schools and special institutions.
There is no playground in town schools. In the outskirts about 35 sq. m. for 350 pupils. There are 10 large drill-halls in the town, with complete gymnastic apparatus, 28 m. × 14 m. generally used for 60 pupils at a time. Temperature 10° R.	There are some special and some adapted. Buildings either in town or outskirts, the latter being well placed. The corridors are 3 m. in breadth. There are no lobbies or cloak rooms, the hats, &c., being kept in the corridors or the classrooms. In the basement are baths and heating furnaces. Roof-space for openings of hot air shafts and drying linen.	1 sq. m. Rooms generally 9 m. × 7 m. The drawing and technical workrooms are larger.	4 m.	Windows with moveable pane. The air from outside is heated by stoves or by a central furnace. Extractors opening on the roof.	Temperature 15° R. in the classrooms. Central air or stoves with air-chambers and warm air-shafts. The latter open in the roof-space. Air moistened in the central chamber or in the room.	Generally rows of pairs. Some old-fashioned in rows of four each. Six sizes with the height of the pupil for which desk is adapted painted on each desk. Complete regulations for proportions of parts of combined desk-seats, for distance of desks from walls and width of space between them. The desk-seat measures about 1·25 m. long, 0·7 m. antero-posteriorly, and 1·2 m. in height at the back—i.e., the highest point. All angles of furniture are rounded. The "Rettich" pattern in general use.	In separate buildings. Each closet separated completely. All with seats. Opening leads direct into cess-pool which is ventilated by special furnace and high chimney shaft. Oil urinals for boys and girls. One latrine for 37 boys or 34 girls.	Gymnastics for older boys and girls form regular part of programme. Smaller children: only walks, drills, and general attention to carriage. All have singing.	Range from 20 hours per week for the youngest to 32 for the oldest, including gymnastics. Hours from 8 A.M. to 11 A.M., and from 2 P.M. to 4 P.M. Wednesdays and Saturdays half-holidays. Intervals between all classes.	General regard to cleanliness. Baths in school not obligatory, but general. Table of infectious diseases in class-rooms. Table of first-aid in drill-halls. No regular medical visits.	Obligatory, "impfzwang." Revaccination obligatory between ages of 10 and 12. No case of small-pox had occurred in the kingdom of Würtemberg for many years till 1899 when one case in an Italian student occurred, but did not spread.	28 elementary free schools, 10 drill-halls, 10,429 pupils. One blind institute (private), and one deaf and dumb institute (private). Provision for backward children under consideration. Many kindergarten (private). Foundling teaching institute.

Switzerland.—Zürich (population 158,000).

Ample tree-planted and gravelled spaces surrounded with iron railings. Boys and girls in the playground together. Drill-halls 1000 square metres for 200 pupils, fitted with apparatus and weighing and measuring scales.	All are special; several quite modern. The entrance-halls, cloak-rooms, and corridors are spacious. There are large entertainment rooms, gymnasiums, and baths and douches (obligatory). The walls are washable to 1½ m. The floor-angle is rounded. The floors are of wood, asphalte, iron cement, linoleum, or cinolite. Four to five storeys.	1 sq. m. + Class-rooms 10 m. × 6 m. to contain from 28 to 60 pupils.	4 +	Hopper lights to the windows nearly the whole length of the outer wall. Hopper lights to the opposite corridor windows. Extractor near the floor with pipe opening into the roof-space. 4 sq. dm. per 100 cubic m. Cleaning flue to the chimney-stack also in the roof-space.	Temperature 14° C. Central—(1) water (expensive); (2) steam (best); (3) air (irregular). The radiators in the rooms, corridors, and latrines are arranged to heat the incoming air.	Combined seat and desk in pairs of varying patterns. The pairs are either isolated or in batches of five pairs on frame-work. Passages between longitudinal pairs of desks.	Automatic periodical flushing syphoned pedestals with seats opening into canalisation or clearing tank. One per class of 50 girls; one per two classes, or 100 boys, with urinals. This is found sufficient as the closes break up every hour. The lobbies contain washing apparatus.	Gymnastic instruction from 10 years of age onwards. Universal walks, drill, &c. Swimming, cross-bow, shooting, singing. Manual work: carpentry, fitting, washing, cooking, modeling, and sewing.	Age from six to 14 years. Morning: 7 to 8 (summer), 8 to 9, 9 to 10, and 10 to 11. Afternoon: 2 to 3, 3 to 4, 4 to 5 (occasionally). A quarter of an hour interval between all classes.	Height and weight are taken and recorded twice a year. Holiday colonies. A medical visit every week in some schools. Vision tests for use by teachers in all rooms. A recommendation that hygiene and first aid be included as obligatory in normal schools. There is a table of first aid directions in the teachers' rooms. There are a hygrometer and a thermometer in the school-rooms. Daily soup-kitchens.	General, not obligatory. There was one case of small-pox two years ago.	38 elementary schools (13,977 pupils). One blind and deaf-mute institute. Special classes for stammerers. Special classes for backward children. 30 kindergarten (1165 children), ages from four to six years, attached to the elementary schools.

REMARKS.

FRANCE (PARIS).

About one elementary school per 7000 inhabitants. The drill-hall, small, and used for many purposes, is provided with water. The playgrounds are small and if on clay soil are paved with wooden blocks. The standard of construction of buildings is far inferior to that seen in Switzerland, Italy, and Germany; the general style of maintenance suffers equally by comparison. The rooms, constructed in the proportion of about 1 sq. m. per pupil, are often overcrowded. The height, which allows of a cubic capacity of 4 cubic m. per pupil, is sufficient, but owing to absence of adequate provision for ventilation the air in the rooms is sensibly vitiated. The stove heating maintains a temperature of 15° C., but the air, heated by circulation through an air-chamber in the stove, is taken from the room itself, and the water-troughs are sometimes found to be empty. Lighting is by gas, about nine over-head (one and a half metres) burners, with reflectors to each class-room, besides one for blackboard. The seats and desks are of an inferior model and do not vary in size. The latrines are in separate buildings and are on the whole good but not sufficiently numerous. Considerable attention is given to physical training, object-lessons, and manual work. The three hours' duration of classes is broken by an interval of a quarter of an hour both morning and afternoon. Hygienic precautions are not obvious, and the general physical condition of the children corresponds to defective ventilation. Judging from the full classes the maternal and "young children" schools are highly appreciated. Doubtless the conditions of a large city and pecuniary reasons account in a great measure for the relative inferiority of the Paris primary municipal schools, but such reasons cannot explain the defective aeration of the class-rooms, a proper provision for which should rank *first* of all hygienic measures.

ITALY (MILAN).

One elementary school to about 7000 population. Some of the schools are attended by over 2000 pupils, boys and girls. Elementary school provision for about one-eleventh of the population. In modern schools the play-grounds and drill-halls are good, but the space is limited. The entrance-halls, corridors, and lobbies are spacious. Lunch is taken in class-rooms. In some buildings provision is made for keeping children up to 10 or 12 years of age till 6 P.M. (*Educatorii* or *Scuole famiglia*). The new buildings have basements about two metres high, well ventilated, and serving to contain boilers of central heating apparatus, drains, and water-pipes; also a lofty "solaio" or roof space. Here chimney-stacks are fitted, in some cases with Abbiati's fire-extinguishing and cleaning flue. The school-rooms are adequately large and lofty and are well lighted, warmed (temperature 13° C.), and ventilated. The capacity is excessive both on account of the great height and generally because the rooms are not fully occupied. The steam heating is either at high pressure (one and a half atmospheres) or low pressure (one-tenth atmosphere). The model of seats is not so good as elsewhere, but it is economical and it fulfils hygienic requirements. The latrines are generally good, clean, and in adequate numbers. Dr. di Cristoferis, the head of the Education Department, is very strong in his advocacy of simple exercises, such as walking, running, and singing, as compared with gymnastics proper. The lessons occupy from three and a half to four hours per day, with intervals between the classes. At the Scuola Poerio a tablespoonful of cod-liver oil is given in addition to municipal rations to necessitous children. The special schools are exceptionally fine and well-appointed buildings, with every modern sanitary installation, including baths and douches. That for defective children is still unfinished, but is palatial in proportion and design. One wing only is occupied.

ITALY (FLORENCE).

One school to about 5000 population. The sites and buildings are generally ill-adapted to their purposes, but every effort is being made to adapt present structures, often ancient and cramped in position, to modern requirements. The areas of playgrounds and drill-halls are generally too small. The areas of schoolrooms vary considerably in different schools; in some there are passages between each pair of desks, in others not. Capacity is generally sufficient on account of the great height which provides against great heat in summer. Floors: pavement set in cement or varnished cement. The angles between the surfaces of the floors, walls, and ceilings are not rounded. Ventilation is not automatic but depends upon the teacher and therefore is uncertain. The latrines are not numerous enough and they are primitive, but are kept clean. The chairs and desks are good, with moveable seats; they are noisy when pupils sit down. Physical training is general in a limited degree. The hours of school work are from three and a half to four, and there is little home work. The teachers are well-trained to watch the health of the pupils. Vaccination is universal and revaccination after 10 years. There is practically no small-pox in Florence. Special institutions are all more modern and better found than ordinary elementary schools. Recent legislation is far in advance of practice in matters of school hygiene and sanitation.

BELGIUM (BRUSSELS).

11 boys' and 11 girls' elementary schools with a total attendance of 13,000—i.e., about one-fifteenth of the population. Modern models accommodate 800 each. As school attendance is not obligatory children are removed at 11 or 12 years of age to work in factories. The playgrounds are large for the centre of a large city. The *préaux* and gymnasiums are spacious, clean, well-ventilated and heated, and are admirably installed. The type of building, solid and permanent in structure, has stood the test of time as to suitability and is adopted as the established model. No unnecessary outlay or useless sacrifice of space betrays itself, while no expense has been spared to attain hygienic and didactic excellence, and ample space is given to fulfil the most exacting hygienic requirements. The class-rooms, lavatory, and gymnasium lead out of the *préaux*. The entrance corridors, two and a half metres wide, are adorned with illustrations representing the results of alcoholism. The balconies around the *préaux* are at the height of four and a half metres, into which the upper class-rooms open. There are hat-pegs in the *préaux*. The latter is paved with ceramic tiles and the walls to two metres are lined with glazed tiles. There is a fine gymnasium with apparatus for Swedish and German exercises. The walls of the building are of brick fully ventilated. The kindergärten are on the same model, but only one floor, three class-rooms, and one play-room. The play-room is occupied constantly by each class in turn. The one sanitary defect which suggests itself is the insufficient provision for the extraction of vitiated air from the class-room. The absence of corridors, except for the main entrance, is one of the characteristic features of the building. The boilers for central heating, baths, and douches are in the basement. The time allowed to each bath and douche is 10 minutes, and 150 baths are given per day in batches of 14 at a time, each pupil in a separate compartment. The roof-space into which the extraction shafts open is clean and well ventilated. The schoolrooms afford ample area and capacity per pupil and are kept thoroughly clean. The seats and desks are of good pattern and are moveable for cleaning. The latrines are excellent, and the pedestals and lavatories are of English make. Physical exercises receive great attention. Hygienic measures of all kinds are firmly established, and I believe the dental department is a feature peculiar to Belgium. The kind of work is varied as far as possible from hour to hour. The special elementary institutions are good, and decidedly Brussels takes a foremost place among nations in its provision and administration of elementary educational institutions.

GERMANY (STUTTGART).

One free school (elementary) to 6000 population. There is provision for one-sixteenth of the population. The playgrounds are good, but not universal; they are surrounded by iron railings, gravelled, and tree-planted. The drill-halls are very fine; they are 10 in number and are used for higher as well as elementary schools. The buildings are fine but are not well provided with lobbies. The basements are provided with tile baths three metres by one metre for many pupils at a time or single tub baths; all are provided with shower-baths. The central heating furnaces are in the basements. The outside air is filtered through canvas and is moistened in heating chambers and then conveyed to the class-rooms in shafts which open into the roof-space and which are cleaned by heavy brooms attached to ropes. The area and capacity of the school-rooms are adequate but are somewhat less than at Zürich and Milan. There is artificial lighting only in the class-rooms for drawing, carving, book-binding, &c., and in the drill-halls. The arc light with large reflector gives the best light, the arc light with reflection from the ceiling the second best, and the incandescent burners come third. Arc lights, however, require more attention and are not so dependable. The temperature in the class-rooms is kept at 15° R. = 18·5° C. = 66° F.; in the drill-rooms at 10° R. = 12·4° C. = 54° F. The seats and desks are of varying patterns and are not all modern; they tilt on edge for sweeping the room and are not made in blocks of pairs but only in isolated pairs. The old and new of good patterns for sitting. The latrines are not of pedestal pattern; there are no water, no traps, and no syphons. Ventilation is by furnace and shaft. The school system here is established and does not betray the active progressive movement so noticeable in Switzerland and Italy.

SWITZERLAND (ZÜRICH).

One elementary school to about 4000 population. Some of the modern schools contain 1000 and 2000 pupils. Elementary school provision of all kinds for about one-tenth of population. Special attention has been given to size and completeness of playgrounds and drill-halls which fulfil specified requirement in each case of three metres square per pupil. Drill-halls warmed, ventilated, and fitted with gymnastic apparatus. The modern elementary school buildings fulfil requirements as to site, position, soil, surroundings, &c., and are palatial in design and proportion. They are generally from four-to-five storied buildings in addition to basement and roof-space. The basement is used for boilers of central heating apparatus, sewage clearing tanks, sewage and water pipes, refectories for necessitous children, manual workshops, baths, douches, &c. The buildings contain special provision for kindergarten and class-rooms for backward children and stammerers. The school-rooms fulfil requirements as to area, height, cubic space, ventilation, heating, &c. Temperature always found about 14° C. Extraction flues work effectively both during and out of school hours and are of required area to change air about two and a half times per hour. The desks and seats, of varying pattern, all fulfil hygienic requirements; in some cases the pairs are in blocks five deep which are fixed on rollers and can be moved to either side for sweeping the room. They are made in four sizes. The lighting is by incandescent electric shade lamps 1·5 metres above desk, in the proportion of one lamp to nine pupils, and placed for light to fall on the pupils' left. It is suggested that arc lights (indirect lighting) would give more light and less shadow. The latrines are exceptionally good and no odour detectable. They are heated and the lobbies contain washing apparatus. Great attention is paid to physical training in class, drill-room, playground, and on walks. The school hours are long but with intervals between all classes. Hygienic precautions include those against infectious disease as well as weighing, measuring, nutrition, bathing, holiday colonies, and general supervision. Vaccination is general but not obligatory, in which connexion it is interesting to note the occurrence of one case of small-pox in spite of great hygienic precautions. In Zürich the maximum attention has been given to *ordinary* elementary schools as distinguished from *special* schools, which order is reversed in Italy.

of the desks to the pupils, and the whole is less scrupulously clean than it might be. These defects cannot be all due to lack of means, for poor Florence can do much better in antiquated palaces. Some of the disadvantages of overcrowding might be mitigated easily by simple measures for regular aeration during class. The impression received is that defects exist because they are not realised. To the credit side, however, may be placed the excellent supply of midday food, the summer colonies, and the large provision for taking charge of young children from the early age of two years (nowhere else attempted) till they enter the primary school.

Such are the impressions received during a visit to representative elementary schools of five European countries. In conclusion, a word of grateful recognition should be said of the uniform courtesy extended in every case, alike by authorities and school *personnel*, to an unexpected and unknown visitor.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THREE CASES OF IMPERFORATE ANUS AND RECTUM.

BY JAMES LAURIE, M.B., C.M. GLASG.,

VISITING SURGEON TO THE GREENOCK INFIRMARY; ASSISTANT SURGEON TO THE THROAT, NOSE, AND EAR DEPARTMENT OF THE GREENOCK EYE INFIRMARY; AND SURGEON TO HIS MAJESTY'S PRISON, GREENOCK.

THE relative infrequency of congenital defects of the rectum and anus prompts me to report the following cases which came under my observation and treatment in 1895. Keating, quoting Ball, says: "In a joint collection of 66,654 deliveries in Vienna and Dublin lying-in hospitals there were only three cases of imperforate rectum."

CASE 1.—I was called at 11 o'clock one night to see an infant (a female), aged 24 hours, and on my arrival at the house I found a midwife busy giving the child injections of soap-and-water, but "still she could get no passage." There was a well-formed anus, and on passing my finger three-quarters of an inch into it I found a very dense membrane occluding the passage. I opened it by a crucial incision, much to the relief of the child, and instructed the mother and the nurse how to keep it dilated by passing the finger, well-oiled, into the part. I saw the child some time afterwards and she was doing well.

CASE 2.—In the second case there was a very fine and delicate membrane closing the external aperture of the anus. The child had been born the evening before and no fæces had passed. The membrane was easily torn by a pair of dressing forceps and the mother was instructed to keep it dilated.

CASE 3.—I was sent for to see this child one forenoon and was informed by the nurse that the infant had been born 16 hours previously and had no anus. On examining the perineum there were a well-marked raphé and considerable bulging when the child strained or cried, but no indication of an anus. Under chloroform, which was administered by Dr. A. G. Newell, I made an incision from the centre of the raphé to the coccyx and felt the rectum bulging downwards. By a blunt dissection for an inch through cellular tissue I found the rectum ending in a blind pouch. Gently pulling it down I incised it by transfixion antero-posteriorly and sutured the ends of the skin. The sutures held. The child made a good recovery and had full control over his bowels.

The infants were all well nourished and were doing well when I heard of them last.

Greenock.

NOTE ON A CASE OF FIBROMA IN THE MALE BREAST.

BY A. WEBB JONES, F.R.C.S. ENG.

CONSIDERING how rarely one meets with new growths of the male breast I have thought the following case of pure fibroma perhaps worth recording.

The patient, an Egyptian soldier, aged 35 years, came to hospital complaining of a gradually increasing swelling of the left breast which he first noticed four months previously. Latterly he had also been troubled with slight pain. On

Showing patient before operation.

examination the left breast was uniformly enlarged to about twice the size of the right. The outline stood out in marked contrast to the opposite side, but retained its general shape. On palpation the mass felt soft and elastic, but no indication of lobulation—as in a lipoma—could be obtained. It was freely moveable on the chest wall.

The breast was removed without difficulty by Thomas's incision. Microscopically the growth proved to be a pure fibroma.

Wadi Halfa.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

PADDINGTON GREEN CHILDREN'S HOSPITAL.

A CASE OF TUBERCULOUS PERITONITIS WITH OBSTRUCTION; LAPAROTOMY AND SHORT-CIRCUITING OF THE SMALL INTESTINE; RECOVERY.

(Under the care of Dr. G. A. SUTHERLAND and Mr. W. WATSON CHEYNE.)

A FEMALE child, aged three years, was admitted into the Paddington Green Children's Hospital in September, 1899. For three months the abdomen had been increasing in size and she had suffered from attacks of vomiting and constipation. There had never been diarrhœa or abdominal pain. In the family history there was nothing to be noted save that one brother had died from pulmonary phthisis. The child's previous health had been good. On admission she was found to be well nourished but markedly rachitic. The abdomen was much enlarged and tense, with dilated superficial veins. Fluctuation could be made out over the greater part, the fluid apparently being free in the peritoneal cavity. The liver was not enlarged and the spleen could not be felt. Deep palpation of the abdominal contents was impossible owing to the amount of distension present. Rectal examination showed the presence of ballooning. The heart and lungs presented no evidences of disease and the urine was small in amount, but otherwise normal. Mercurial inunction over the abdomen was ordered and a mixture of cod-liver

oil and iodide of iron for internal use. During the first fortnight after admission the following conditions were noted. The temperature for the first week usually reached 99° F. in the evening, but afterwards became subnormal, with a daily range of less than one degree. No pain was complained of, the bowels acted regularly, and the fluid present in the abdominal cavity seemed to vary considerably from time to time. At intervals of a few days attacks of vomiting occurred, one or more in the day, not preceded by nausea, and unaccompanied by any loss of appetite. The abdomen continued much distended, and at times on manipulation coils of intestine stood out prominently. These coils would remain rigid and hard for a few seconds, then gurgling was heard, followed by visible peristalsis and gradual subsidence of the prominent coils. From the appearance of these coils, the so-called "ladder-like" formation, it was concluded that they formed part of the small intestine and that there must be obstruction at or above the ileo-cæcal valve. The conditions above described increased in intensity during the following five weeks. The vomiting became more frequent, the bowels failed to act save after enemata, the evidence of obstruction became more marked, and the child was rapidly losing ground.

On Nov. 5th, seven weeks after admission, the abdomen was opened by a median incision about four inches long, extending an inch above the umbilicus. A small quantity of straw-coloured fluid escaped. An extensive condition of tuberculous peritonitis was found, the small intestines being congested, distended, and everywhere studded with numerous tubercles, ranging in size from pins' heads to peas, the larger being white and evidently caseous. There was not a great deal of matting of the intestines, but some bands were found and divided. The omentum did not come into view, but the mesenteric glands were enlarged and caseous. On examining the state of the intestines towards the lower end of the ileum a hard nodular portion was found which was evidently the seat of the obstruction. The bowel at this point was much thickened all round, evidently in connexion with an extensive tuberculous ulceration of the interior, and the lumen was practically obliterated. An anastomosis was made between the portions of the intestine above and below this mass, but it was impossible to find any healthy intestine and tubercles were present in the opposed portions of the intestine. The anastomosis was performed in the ordinary manner by a double row of sutures and the abdomen was closed in the usual manner.

The patient was in a collapsed condition for some time after the operation, which lasted about an hour, but rallied well next day. The wound healed well with the exception of a small part at the lower end where a stitch had given way, but this also was well in a fortnight. There was not much alteration in the abdominal condition for some time after the operation. One month later it was noted that the abdomen continued distended and tense and that occasionally visible peristaltic movements were produced on manipulation. The acute obstructive symptoms subsided after the operation and the child took her food well. Two months after the operation the abdominal condition had greatly improved. The abdomen was now soft although still rather distended, an ill-defined thickening could be made out on the right side, as seen at the operation, but no visible peristalsis could be elicited. There was still apparently some free fluid present. The child had gained four pounds in weight. Four months after the operation she was in good health, running about all day and eating well. On examination of the abdomen nothing abnormal could be detected in the form of thickening, distension, or fluid. At the end of 18 months she was in excellent health and had passed successfully through attacks of pneumonia, measles, and diphtheria.

Remarks.—The symptoms in this case were clearly due to tuberculous peritonitis with obstruction of the bowel. Operative treatment was adopted, first as in itself a valuable therapeutic agent, and secondly for the relief, if possible, of the intestinal obstruction which was threatening the patient's life. The recovery of the patient was remarkable and unexpected. The child was in such a serious condition that it was very doubtful if she could rally from the shock of the operation, while the portions of intestine applied to each other were so diseased that failure of union and subsequent fæcal extravasation seemed very probable. At the time the question arose as to resection of the tuberculous mass and end-to-end suture, but this was considered inadvisable from the weak condition of the child and the diseased state of the intestine. The result of the operation is a striking example of the mysterious influence of laparotomy on the course of this affection, even although none of the disease is removed. No doubt in early cases of tuberculous peritonitis it is well if possible to remove the primary focus, but the great majority of cases in which surgical interference would be considered are so advanced and extensive that any attempt of this kind would be very likely to end fatally. Cases like the above show that such radical measures are not always necessary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

THREE CASES OF GRAVE ABDOMINAL INJURY SHOWING THE DIFFICULTY OF FORMING A CORRECT DIAGNOSIS.

(Under the care of Mr. C. E. RUSSEL RENDLE, assistant surgeon to the hospital.)

IN the following three cases the difficulty which is often experienced of diagnosing acute abdominal disease is well exemplified. In the first case a ruptured gastric ulcer was mistaken for an appendicitis. The sex and age of the patient were certainly in favour of the diagnosis of rupture of an appendix, but the very sudden onset might incline the diagnosis towards a rupture of a gastric or duodenal ulcer. A history of dyspepsia is encountered in more than nine-tenths of the cases, and the absence of such a history was certainly against the gastric lesion. This was typically a case for early exploratory laparotomy. In the second case an appendicitis was thought to be an acute intestinal obstruction, but it does not appear from the notes that at any time vomiting was marked or even that it occurred at all. On the whole, the evidence was in favour of peritonitis from extravasation. In the third case the diagnosis of a ruptured gastric ulcer, though at the operation found to be erroneous, was fully justified when the long history of dyspepsia is considered, though the onset was not very rapid. In all such cases the danger of an early exploratory laparotomy is slight—very much less, indeed, than the risk the patient will run if the case be left. As to the part of the abdomen to be first opened, this must depend on the provisional diagnosis, and even should it be wrong, the increase of the risk to the patient is but slight.

CASE 1.—A man, aged 56 years, was admitted into the South Devon and East Cornwall Hospital about noon. On the previous afternoon about four o'clock while carrying a heavy beam in H.M. Dockyard, Devonport, he felt a sudden agonising pain in the abdomen. He was taken to the surgery and was sent home in a cab. A medical man relieved the pain by morphia, but the patient refused to go at once to the hospital. When admitted he was under the influence of morphia, and as no one went with him it was impossible to be certain of his statements, but he persisted that he had been perfectly well up to the time of his accident. He had a normal temperature and a good pulse of 84. He did not complain much of pain and suffered fairly deep palpation, the abdomen being only a little distended; liver dulness was present and some respiratory motion also. As the theatre was in use at the time and as his condition appeared to be so good, Mr. C. E. Russel Rendle decided, in consultation with one of his senior colleagues, to defer operation till four o'clock, making a provisional diagnosis of ruptured appendix. When Mr. Rendle returned to the hospital at 3.45 P.M. he saw the patient's wife, who confirmed his statement as to his general good health, saying that he had not been ill for years, save that on the evening prior to his attack he had a stomach-ache and went to bed early, having a hot poultice. On the next morning, however, he appeared to be quite well, went to work, and ate his dinner as usual. On being questioned as to dyspeptic symptoms she said that he did not know the meaning of indigestion. When Mr. Rendle saw the patient, however, his condition had very seriously changed for the worse and it was with grave misgivings that he prepared to operate. The abdomen was opened through the right rectus and the peritoneal cavity was found to be full of semi-purulent turbid fluid. The appendix was found to be healthy, no ruptured bowel could be seen, and it was concluded that a ruptured gastric ulcer must be the cause of the symptoms.

The patient's condition did not, however, admit of the stomach being explored and he died within an hour.

Necropsy.—At the post-mortem examination an ulcer of the size of a threepenny-bit was found at the apex of the lesser curvature, near the cardiac end, and rather on the posterior surface. It was very high up and awkwardly placed, so that to introduce a tube would have proved a work of considerable difficulty. Except for the one ulcer the stomach was healthy.

CASE 2.—A man, aged 49 years, called Mr. Rendle up at midnight on account of severe abdominal pain. About an hour after a dinner of pork and stewed rhubarb he had begun to feel abdominal pain which had gradually increased till now it was extreme, chiefly at the epigastrium. Morphia and turpentine stupes relieved him and on the next day he seemed to be better, though still tender to the touch; his bowels, which had not acted on the morning of his attack, were confined, not even flatus passing. On the following day this condition continued in spite of purgatives; the pain had practically vanished and Mr. Rendle concluded that he had an internal obstruction to deal with. A surgical colleague saw the patient with him, agreed in the diagnosis, and both advised removal to the hospital and an exploratory operation. The patient and more particularly his friends all had a great horror of operation, and would only agree to his entering the hospital on condition that nothing should be done until frequent enemata (which had been administered at home, but not very effectively) had been tried; and most unfortunately these brought away a good deal of fæcal matter and he was able to pass flatus, his general condition being at first much improved. The improvement, however, was not maintained, and on the fifth day, as he was obviously losing ground, permission was obtained to operate. A ruptured appendix was found, ligatured, and removed, but the patient never rallied and died on the following day.

CASE 3.—A married woman, aged 41 years, was admitted into the South Devon and East Cornwall Hospital one evening on account of severe abdominal pain. She had suffered for years from indigestion off and on, but had been pretty well (for her) until two days previously. She then was seized shortly after breakfast with griping pains which lasted all day more or less; on the next day they still continued, but she was able to do her usual work and took her ordinary food. The bowels not having acted for two days she took half an ounce of castor oil at night, after which the pain just below the sternum became exceedingly acute, and continued so all night in spite of a copious relief of the bowels. She tried to get up on the following morning but had to return to bed. She was seen by a medical man, who put her on a diet of milk only, and sent her to the hospital in the evening. On admission she was obviously very ill; the temperature was 100·6° F. and kept rising, the pulse was 112, and the respirations were 24 and purely thoracic. The abdomen was distended and very tender, especially over the epigastrium; liver dulness was nearly absent. It seemed to all who saw her, looking at her symptoms and previous history, that a gastric ulcer was probably the cause of her trouble, and accordingly Mr. Rendle opened the abdomen in the middle line over that organ, but found it, as also the small bowel, save for flakes of recent lymph and free fluid in the peritoneal cavity, quite healthy. He then made a second opening through the right rectus and came down on a mass of omentum which was adherent somewhere near the appendix. This was transfixed and ligatured, when about an ounce of very fœtid pus was evacuated from deep down in the pelvis. The appendix could not be found for some time as it was bound tightly down by adhesions. The right ovary and tube, very swollen and œdematous, were removed, thus freeing the appendix and bringing it into full view. The patient's condition was now exceedingly grave and she seemed to be practically moribund. Dr. W. L. Pethybridge kindly transfused her with three pints of saline solution, and Dr. H. W. Webber sutured the incision over the stomach while Mr. Rendle rapidly transfixed the appendix and meso-appendix with silk, tied it, and cut the appendix away close to the cæcum. He did not think it safe to spend even the little time necessary to fold in the edges of peritoneum, but put a Keith's glass tube deep down into the pelvis and closed the wound as rapidly as possible. The patient made an uninterrupted recovery.

Remarks by Mr. RENDLE.—The difficulties that attend the correct diagnosis of grave abdominal injuries are already sufficiently well known, but the above cases that have recently come under my care (during the illness of my senior) may be of interest as showing how even the most carefully formed opinion may prove to be in error. In each of these cases a wrong diagnosis was made as to the nature of the illness both by myself and by the colleagues who saw them with me, but I do not think that we were therefore to blame. Peritonitis was obviously present in each case and only the cause had to be determined. In Case 1 the onset seemed to be characteristic of a ruptured appendix, especially as there was an absolute denial of any previous indigestion or symptoms pointing to the stomach, which also seemed to be contra-indicated by the age and sex of the patient. In Case 3 the converse appeared to be probable, and, accordingly, I turned my attention to the stomach first of all. Case 2 is the one upon which I look back with much regret. The question of the appendix being at fault was considered very carefully, and we both of us came to the conclusion that it was not; but even here, had we been able to get leave to operate earlier, as we wanted to do, the result would probably have been very different. It was a case where an exploratory operation seemed to be absolutely necessary, but, as so often happens, the friends of the patient were dead against it and influenced him to refuse consent until it was too late. I thought this group of cases, which followed close on one another, worthy of being recorded.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Modern Methods of Vaccination and their Scientific Basis.

A MEETING of this society was held on Jan. 14th, Dr. F. W. PAVY, the President, being in the chair.

Dr. S. MONCKTON COPEMAN, in the first place, repeated that portion of his demonstration which was given at the last meeting of the society and which was fully reported in THE LANCET of Dec. 14th, 1901 (p. 1670), dealing with the transference of variola through monkeys and calves, and the subsequent successful vaccination of the child with the lymph thereby obtained.

Professor SIMS WOODHEAD said that he had performed many experiments in order to test the effect of adding glycerine to calf lymph and he could fully confirm the observations of Dr. Copeman. He said that the addition of 50 per cent. glycerine to lymph had a greater effect in eliminating the non-spore-bearing organisms than the spore-bearing organisms, but that the staphylococcus pyogenes aureus was more resistant to the action of glycerine than other organisms, but that even on this organism it had a considerable effect, since it diminished all but a few—probably about 5 in 1000 being left. The spore-bearing organisms were almost entirely unaffected by glycerine and this seemed to give some indication of the nature of the organism of vaccine, which might be so small as to be invisible to the present power of the microscope. It had been pointed out by THE LANCET Special Commission on Glycerinated Calf Vaccine Lymphs[1] that when the spore-bearing organisms were in excess in the lymph, the collection of the vaccine lymph had not been carried out with all the care that could be desired, and he considered that if a lymph showed many spore-bearing organisms it was a proof that the vaccine had not been properly collected. He then dealt with the effects of glycerine on the activity of the lymph and said that he did not believe that for three or four weeks it diminished the potency, but that after that time the lymph lost some of its activity. He believed that glycerination had most effect on those organisms which grew at the body temperature. It had been stated that "worse" arms and more local inflammation were caused by glycerinated lymph. This he did not believe to be the case, but he asked that the Local Government Board should, if possible, prepare statistics from their returns in order to decide this point.

Dr. T. D. ACLAND said that he hoped that the time would

[1] THE LANCET, April 28th, 1900, p. 1227.

not be far distant when the Government would take steps to supply a standard lymph throughout the country. He divided the subject into three main headings: (1) the origin of vaccine lymph; (2) the preparation of vaccine lymph, especially in relation to its purification, standardisation, and storage; and (3) the use of the prepared lymph, especially in relation to methods of vaccination, dosage, efficiency of vaccination, and the question as to the extent and duration of after-effects or complications of vaccination. He pointed out that although vaccination was in vogue more than 100 years ago it had been outstripped in the scientific details of technique by many of its successors in the department of protective inoculation. He said that glycerine had long been used to dilute lymph, but that until the research of Dr. Copeman it had not been used as a scientific means of freeing the lymph from extraneous organisms. He then referred to the standardisation of lymph by inoculating rabbits and said that in this way the potency of any particular lymph might readily be tested before being sent out without having resort to the necessity of vaccinating infants. He said that this method had been carried out at Lille with great success for over two years. He considered that vaccination as practised was open to two main objections, firstly, the necessity for creating a local sore which proved a possible starting point for various inflammatory complications; and secondly, that in the homes of the poor the vaccinated child imposed an extra burden on the already overworked mother. He next dealt with the extent and number of vesicles produced and thought that there ought to be a fixed irreducible minimum below which no certificate of successful vaccination should be given. Lastly, he referred to the treatment of variola by the antitoxin of vaccinia and stated that cases had been thus treated with serum taken from a calf which had been vaccinated four weeks previously. The observations were, however, inconclusive. He gave notice of the following motion:—

That in the opinion of this meeting of Fellows of the Royal Medical and Chirurgical Society it is desirable that the Government should without delay make such additions to the national vaccine establishment as shall enable it to supply glycerinated calf-lymph to all medical practitioners who may desire to use it; and that, in view of the national importance of the subject, steps should be taken to test and regulate the sale of all imported lymph and to inspect the manufacture of all that is made in this country.

Professor HACCIUS (Geneva) said that in 1892 he experienced considerable difficulty in obtaining good lymph in calves and cow-pox could not be found. He therefore attempted to transmit variola to the calf; in this he was successful, and after passing the virus through seven calves he then inoculated a child with the result that typical vaccine vesicles were formed. These results he published, but Professor Chauveau of Paris held that the disease in the calves was vaccinia and not modified variola, and further Professor Chauveau inoculated a cow with variola and from the vesicle produced inoculated a child who developed typical variola. He (Professor Haccius), however, explained the last result as being in reality due to the direct transference of the variola virus, the cow being merely a stage in its transference. He said that Dr. Stumpf of Munich had carried out experiments similar to those of his and had confirmed his results. It was well known that all cases of variola could not be thus transmitted to the calf, but he believed that the identity of vaccinia and variola would be proved.

The discussion was adjourned.

A demonstration with the "Epidiascope" was given after the meeting.

MEDICAL SOCIETY OF LONDON.

Observations on the Surgical Treatment of Obstructive Jaundice, resulting from an Experience of over 200 Operations.

A MEETING of this society was held on Jan. 13th, Dr. W. H. ALLCHIN, the President, being in the chair.

Mr. A. W. MAYO ROBSON (Leeds) read a paper upon the above subject. He said that his recent operative experience in cases of chronic obstructive jaundice, especially in those associated with gall-stones and with chronic pancreatitis, had led him to take a more hopeful attitude in considering the treatment of deeply jaundiced patients from a surgical standpoint. The first and often the most difficult question was that of diagnosis, and the following causes of jaundice must be taken into consideration: (1) common duct cholelithiasis; (2) chronic pancreatitis; (3) simple stricture of the common bile duct; (4) inflammatory adhesions causing pressure on, or stenosis of, the hepatic duct or of the common bile duct; (5) hydatid disease of the liver pressing on or discharging into the bile ducts; (6) gummata implicating the ducts; (7) chronic catarrh of the bile ducts; (8) cancer of the common bile-duct; (9) cancer of the head of the pancreas; (10) cancer of the liver associated with jaundice either due to catarrh or pressure; (11) cirrhosis of the liver; and (12) other rare causes, such as aneurysm of the hepatic artery or of the aorta and other tumours of the liver, the gall-bladder, the pylorus, the kidney, or the intestine pressing on or occluding the common bile duct. Surgery held out good prospect of cure in the first five causes enumerated. Medical treatment alone was advisable for the sixth and seventh causes and in the remainder with certain exceptions relief could only be hoped for. Mr. Mayo Robson then dealt with one or two points which he had found of use in guiding him to a conclusion as to whether the case was suitable for an exploratory operation or not. He said that a painless onset of chronic jaundice must always give rise to the suspicion either of chronic catarrh dependent on cancer of the liver, or of occlusion of the hepatic or common bile duct by growth, and if this were associated with distension of the gall-bladder and rapid loss of weight and strength, cancer of the head of the pancreas would probably be found. On the other hand, the history of an attack of pain followed within from 24 to 36 hours by jaundice was strongly suggestive of cholelithiasis. Enlargement of the liver was much more common in obstruction due to cancer than it was in that from gall-stones. The presence of ascites was suggestive of malignant disease. The jaundice of gall-stones was rarely continuous but it increased and diminished from time to time, whereas the jaundice of obstruction due to growth steadily increased. Fat in the motions and glycosuria with very rapid wasting were suggestive symptoms of pancreatic trouble. A rigid right rectus abdominis and tenderness one inch above and to the right of the umbilicus were suggestive of gall-stone trouble, as was McBurney's tender spot of appendicitis. The question as to treatment depended on the diagnosis. 1. If the diagnosis was doubtful an exploratory operation was advisable, providing that the general condition of the patient rendered it probable that such a procedure *per se* would not hasten death. 2. If malignant disease was positively diagnosed operation could, with some few exceptions where it had been possible to completely remove it, do but little good. 3. If gall-stones, or in fact any of the first five enumerated causes, were diagnosed, operation was decidedly advisable. Mr. Mayo Robson then proceeded to consider these three conditions, and he quoted five cases regarded as hopeless which had been operated on with good success; these cases, he said, supported his first proposition. With regard to the second proposition he considered that there were two classes of cases in which operation could do no good—(*a*) primary cancer of the liver and (*b*) cancer of the head of the pancreas—but in young patients the question of operation should always be considered, as malignant disease of the pancreas was not common until middle age. Three cases were quoted which showed that in forms of cancer other than those mentioned relief or apparent cure had resulted from operation. With regard to the third proposition operation was urgently demanded. 212 patients suffering from obstructive jaundice dependent upon one or other of the causes above mentioned had been operated on. Of these 183 recovered, showing a mortality of 13·6 per cent. A careful study of the causes of mortality showed that the two greatest dangers were hæmorrhage and shock and the two next serious causes were exhaustion and sepsis. The employment of chloride of calcium in large doses had been an efficient means in controlling the hæmorrhage, and the administration of strychnine and large saline enemata, with or without brandy, half an hour before operation had diminished shock. But of even greater importance was the cultivation of the habit of operating expeditiously, and even the most complicated cases should not occupy more than an hour.

Mr. J. H. MORGAN said that the success of the operation evidently depended on the accuracy of the diagnosis which had preceded operation and that that accuracy had been derived from experience. He considered that rapidity of operation was most important and that shock could be largely avoided thereby.

Mr. F. S. EVE said that he thought it advisable to explore

any doubtful case, and especially those cases in which the patients were still comparatively young. He did not think that all cases of chronic enlargement of the head of the pancreas did well, and he referred to one case of a man who at the time of operation was thought to be the subject of malignant disease, but at the necropsy the head of the pancreas was found to be the seat of chronic inflammation. He did not think that it was possible in many cases to push a gall-stone back along the common duct into the gall-bladder.

Mr. A. E. BARKER said that from time to time cases were met with which were believed to be cancer and in which the patients made good recoveries. He referred to the case of a woman in whom he had explored the abdomen and had found what he considered to be cancer and accordingly had given a grave prognosis. The patient made a good recovery and was well a year after the operation. He thought that celerity in operating and protection to the patient from cold did most to eliminate shock.

Mr. W. G. SPENCER suggested that the duration of the disease was an important factor in the diagnosis, for in those cases which ran a rapid course the disease was commonly situated in the head of the pancreas, whereas in those of more chronic course the growth might be secondary to the irritation caused by gall-stones. He suggested that some cases might be due to the occurrence of gumma of the liver and deprecated operation in such cases.

Mr. J. HUTCHINSON, jun., did not consider that rapidity of operation was so important as Mr. Mayo Robson considered, for in operations on the lower abdomen the most successful results were obtained by the slower operators. In comparing cases of intestinal obstruction in which a Murphy's button had been used with those which had been sutured, the mortality was less in those sutured (although a longer operation) than it was in those in which a Murphy's button was used. He asked if in the treatment of cases of ascites stitching the omentum to the abdominal wall had been shown to be of any service. With regard to those cases in which cancer was seen at the time of the operation and yet the patient recovered he said that he did not believe that it was the effect of the operation, and he mentioned the case of a man with ascites, jaundice, and lumps in the liver who recovered without any operation.

Dr. A. F. VOELCKER asked what dose of calcium chloride had been used in these cases.

Mr. MAYO ROBSON, in reply, said that he gave 30 grains of calcium chloride three times a day for from two to three days before operating and one-drachm doses with saline solution per rectum subsequently to the operation. He mentioned a case in which chloride of calcium had proved of good service in arresting hæmorrhage. He was convinced that it was inadvisable to operate in cases of cancer of the head of the pancreas.

CLINICAL SOCIETY OF LONDON.

The Radical Treatment of Chronic Tuberculosis of the Intestine.—A Case of Hair Ball removed from the Stomach of a Child, aged Nine Years.

A MEETING of this society was held on Jan. 10th, Mr. HOWARD MARSH, the President, being in the chair.

Mr. A. W. MAYO ROBSON (Leeds) read a paper on the Radical Treatment of Chronic Intestinal Tuberculosis, in which he observed that whatever might be their views regarding the treatment of acute intestinal ulceration surgical treatment was generally advisable in chronic intestinal tuberculosis. He related seven cases (one male and six females) in which he had operated with only one death, and remarked that while in the first and seventh of his cases the adhesions to adjoining parts were very intimate in the other cases the affected part of the bowel was quite free, thus rendering operative measures easy and simple. In the first, second, third, and fifth of his cases he had employed a decalcified bone bobbin as a temporary splint over which to apply sutures, a method which he had described on numerous occasions and which he still employed and advocated as being simple and efficient. The physiological rest to the diseased parts secured by short-circuiting, as in his third case, and by colotomy, as in his sixth case, seemed to answer so well that where the radical operation of excision involved serious difficulties or the patient was not in a condition to bear it he would not hesitate in future to be content with similar procedures and then to trust to general treatment and hygienic surroundings to assist in the cure. If in the future operative treatment should be thought advisable in acute cases he anticipated that short-circuiting the diseased area would be found to be the more useful procedure, as it was the easier and safer method to pursue, but experience alone would show whether the suggestions would prove of as much service in acute as they were in chronic cases. It was interesting to note that in his first and seventh cases, in which a condition of tuberculous peritonitis coexisted with tuberculous ulceration of the intestine, the mere exploratory operation had not cured or even arrested the tuberculous process, but that the radical operation of removing the principal focus of disease or, as in his third case, the short-circuiting and so setting at rest the diseased bowel, was in all three cases effectual in putting a stop to the tuberculous peritonitis and, so far as could be seen without the parts being exposed, in curing the more diffuse disease. All surgeons must have had the experience of curing tuberculous peritonitis by simple abdominal section, with or without drainage, and probably many of them had also experienced disappointment in other cases where the effusion had returned after a longer or shorter interval. He suggested that the explanation of these recurrent cases lay in the fact that the original focus of disease in the ovaries, Fallopian tubes, or bowel, had not been removed and had again been the starting-point for a further effusion of the tubercle throughout the peritoneal cavity. If that were the correct explanation the remedy was quite clear—viz., that wherever the original disease might be it should be removed, if that were possible without adding seriously to the risk of operation.—Dr. W. EWART asked what were the early symptoms which led to the diagnosis of tuberculous ulceration of the intestine and what were the indications for operation. He also asked if tuberculin had been used as a means of diagnosis.—Mr. CHARTERS J. SYMONDS pointed out that the symptom which in the cases recorded had led to operation was obstruction and that operation had been performed rather for the relief of obstruction than for the treatment of ulceration of the intestine. He quoted the case of a female, aged 25 years, who had recurring attacks of mild appendicitis. The appendix had been removed and a fæcal fistula had formed when she first came under observation. The cæcum was excised and an end-to-end union of the intestine was made. At the time of the operation tuberculous ulceration of the intestine was seen to be present. He mentioned two other cases of possibly tuberculous stricture of the small intestine in men. One of these patients had been subject to symptoms of obstruction for 20 years. In this case two feet of enormously distended intestine were excised. In the other case a man, aged 40 years, was too ill to stand the excision of the intestine but the gut was short-circuited. He thought that Mr. Mayo Robson's suggestion of removing the localised focus of tubercles was a good one.—Mr. W. WATSON CHEYNE said that there were two important points for discussion: the first was the treatment of tuberculous ulceration by excision or short-circuiting, and the second was whether the focus of the tuberculous disease should be searched for and removed. He quoted the case of an infant with extensive tuberculous disease of the peritoneum with symptoms of obstruction. In this case he short-circuited the intestine and at the time of the operation tubercles were seen all over the peritoneum. The child made an excellent recovery. He was convinced that the treatment of tuberculous ulceration of the intestine by short-circuiting was sound practice, but he considered it debateable whether the searching for and removal of the original focus were advisable, though, of course, where the disease was strictly limited—as, for instance, to the Fallopian tubes—these should be removed. In diffuse tuberculous peritonitis it was inadvisable to search for the focus as the patient could seldom stand the prolonged operation.—Dr. G. NEWTON PITT thought that the operation in the cases recorded was performed rather for obstruction than for ulceration of the intestine. He considered it inadvisable to interfere with cases in which there was "matting" of the intestines. Although tuberculous affections of the appendix were not uncommon at post-mortem examinations he thought that tuberculous appendicitis was decidedly rare.—Mr. A. E. BARKER said that he had removed a tuberculous mass from the abdomen of a little girl in the region of the

appendix and the child had made a good recovery. He considered that it was inadvisable to interfere with those cases in which there was "matting" of the intestines and in such of these cases on which he had operated he had always regretted it, as the wound had opened up and fæcal fistulæ had formed, the final condition of the patient thereby being rendered very distressing. The cases most suitable for operation were those with a considerable amount of fluid. He did not think that tuberculous disease of the appendix was of common occurrence. He then entered on the question of how much of the intestine might be safely removed and mentioned a case in which the cæcum, the ascending, the transverse, and the descending colon had all been successively removed for tuberculous ulceration and the patient after the final operation remained in excellent health.—Mr. C. R. B. KEETLEY thought that it was important in all cases of tuberculous peritonitis to find the point from which the disease had arisen. He classified the cases under three headings—the first, cases in which a tumour could be felt (this, he said, was always glandular); the second, cases in which there was a tuberculous appendicitis; and the third, cases in which there was diffuse tuberculous peritonitis. He quoted a case in which he had removed some suppurating glands in the mesentery and the patient had made a good recovery and he considered that the presence of enlarged glands in the mesentery was a valuable indication of the seat of the disease and should always be looked for at the time of the operation. He considered that patients with abdominal tuberculosis usually stood the severe abdominal operation very well.—Dr. NORMAN DALTON mentioned the case of a girl, aged 12 years, who was taken acutely ill with symptoms of appendicitis. The abdomen was opened and the peritoneum was seen to be thickly studded with tubercles. The girl made a good recovery.—Dr. PERCY KIDD referred to the difficulties of diagnosing ulceration in early cases of the disease. He thought that in most cases there was also disease of the lungs. Multiple ulcers of the intestine were generally found and these were more common in the cæcum than in the ileum, and it was curious that tuberculous appendicitis was not more common considering how frequently this region was the seat of tuberculous ulceration.—Mr. MAYO ROBSON, in reply, said that out of some 300 cases of appendicitis in which he had operated five had been tuberculous. He considered that loss of flesh, diarrhœa, abdominal pains, and night sweats were the symptoms upon which he had relied for the diagnosis of ulceration of the intestine. He believed that the removal of the focus of the disease was most important.

Dr. E. PERCY PATON read a paper on a case of Hair Ball in the Stomach of a Child, aged Nine Years, which was successfully removed. The patient was an intelligent girl in whom a lump was accidentally found in the epigastric region. As she was known to have eaten hair and other similar substances since she was three years old and had only been broken of the habit recently a hair ball was diagnosed. There were no gastric symptoms. On opening the stomach a mass, consisting chiefly of the child's own hair, seven inches long, weighing seven and a quarter ounces, and having the general shape of the stomach, was extracted. The child recovered without a bad symptom.

OBSTETRICAL SOCIETY OF LONDON.

Chorio-epithelioma with Pulmonary Metastases.—Pneumococcic Meningitis.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 1st, Dr. PETER HORROCKS, the President, being in the chair.

Dr. CUTHBERT LOCKYER read a paper on a case of Chorio-epithelioma with Pulmonary Metastases, in which the evidence of an abortion lay in the fact that the patient lost blood freely four months before admission, the loss continuing until she was sent to hospital. The patient was 42 years of age. She had given birth to seven children. The last confinement took place three and a half years before admission into the Samaritan Hospital. Three abortions were recorded, the last being 13 years before the patient was sent to the above hospital. She was admitted with evident uterine enlargement and in a condition which prohibited operative interference. The uterus was perforated by a new growth in its walls and secondary deposits were found in the lungs. The pathological characters of the primary and secondary growths were described, pathological proof of the occurrence of chorio-epithelioma following immediately on the removal of hydatidiform mole was given, and the paper was followed by a lantern demonstration on the close association between vesicular mole and chorio-epithelioma.—The PRESIDENT remarked that it was quite impossible to prove definitely whether these malignant growths were of maternal or of fœtal origin. Even if it could be shown that they were developed from the outer epithelial layer of the villi of the chorion, that would not settle the question, because it was still disputed whether that layer was maternal or fœtal. It was for this reason that he had named his own specimen, shown at the society some months ago, "deciduoma malignum," the name given by Sänger who first described the condition. He could not help leaning to the view that it was fœtal in origin, and he did not see how those who believed in its maternal origin could get over the fact that it so often followed upon hydatidiform mole. The point raised by Dr. Lockyer that there were two sorts, one without syncytial elements, probably maternal in origin, to which the term "deciduoma malignum" would be appropriate, and one with syncytial elements of fœtal origin, to which the term "chorio-epithelioma" would be better applied, was no doubt very important. But it had to be proved. Could, for instance, Dr. Lockyer say that in all cases of this malignant growth which had followed vesicular mole there had been syncytial elements? In every instance of this malignant growth it was very desirable to investigate thoroughly the question of a recent pregnancy, miscarriage, or parturition. In his own case this had been very difficult to ascertain. The woman was 48 years of age and had had a child two or three years previously. The growth was typical and contained syncytial elements.—Mr. ALBAN DORAN stated that when the patient was admitted into his wards she was too ill for any operation. At first sight sloughing fibroid seemed probable, but on further examination extensive malignant disease was evident. It was remarkable that she lived so long. Dr. Lockyer was to be congratulated upon his excellent report of the pathology of this case. Many similar cases must have been overlooked or misinterpreted.—Dr. HERBERT SPENCER said that while he agreed with Dr. Lockyer's views in the main, he thought it would for the present be better to use the term "deciduoma malignum" until a little more was known about the pathogenesis of the disease. There was no doubt that two distinct classes of growth had been described under this name. But Klebs, who was, he thought, the first pathologist to investigate the disease, had hesitated whether to describe it as a cancer or a sarcoma, and the late Dr. Kanthack had stated his decided opinion that his (Dr. Spencer's) case, which showed large masses of typical syncytium, was a sarcoma. He thought therefore that it was a little premature to style it a "chorio-epithelioma," though personally he was inclined to regard the syncytial growth as of that nature.—Dr. LOCKYER, in reply, stated that the patient's history afforded no proof of a period of amenorrhœa prior to the onset of hæmorrhage which began suddenly in June and continued until November, 1900. He thought that the syncytial masses were of chorionic origin and if a chorionic villus was entirely fœtal it followed that any neoplasm arising therefrom must likewise be of fœtal origin. He adopted this nomenclature of "chorio-epithelioma" for his specimen, believing that the syncytial envelope of a chorionic villus was an epiblastic fœtal structure. The term "syncytial carcinoma" would be equally applicable in the case of these new growths.

Dr. THOMAS WILSON (Birmingham) read a short communication on a fatal case of Primary Pneumococcic Meningitis simulating Puerperal Eclampsia, in which there was 1·5 per cent. of sugar in the urine but only a cloud of albumin.

Dr. A. H. N. LEWERS showed two specimens of Cancer of the Body of the Uterus removed by abdominal panhysterectomy.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—The Movements of the Pelvic Bones during Symphysiotomy.—Full-term Intact Extra-peritoneal Gestation.—Expulsion of a Dermoid Ovarian Cyst per Vaginam during Labour.

A MEETING of this society was held on Jan. 8th, Dr. JAMES RITCHIE, the President, being in the chair.

Dr. N. T. BREWIS showed: (1) A Cyst of the Kidney weighing 48 pounds and measuring 48 inches in circum-

ference; (2) a Calculus removed from the pelvis of a kidney; (3) a large Gall-stone; (4) a Tubal Gestation; and (5) Some Fibroid Tumours.

Dr. D. BERRY HART showed a Microscopical Section of Actinomycosis of the Ovary.

Dr. A. C. SANDSTEIN sent a paper on the Movements of the Pelvic Bones during the Operation of Symphysiotomy and the true function of the Section of the Pubic Symphysis. The paper was communicated by the Secretary. The conclusions arrived at were based on a study of symphysiotomy on 28 recent female cadavera taken at random in the post-mortem theatre. All the pelves except two had true conjugates of over four inches. The movements that occurred during and increased with the separation of the pubes after symphysiotomy were as follows. The first was the movement of the pubes outwards by rotation of the innominate bones on vertical axes passing through their respective sacro-iliac joints. The outward rotation could only increase the sacro-pubic diameter to a very limited amount. For although each pubis was carried further from the sacral promontory than it was before, yet it was not so with the line joining the two pubes, which, indeed, in some shapes of pelves might even be carried nearer the sacral promontory. The second movement consisted in rotation of the innominate bones on a horizontal transverse axis passing through the sacrum, and carried the pubes downwards. This was estimated by measuring the exact vertical height of the centre of the sacral promontory above the upper end of the symphysis pubis before symphysiotomy, and after it above the line joining the upper ends of the separated pubes. Careful measurements were made with degrees of separation varying from one to eight centimetres; it was found that there was positive proof of the existence of that movement of the innominate bones, and one might at least calculate on a depression of the pubes of 1·4 millimetres for each centimetre of pubic separation. The third movement consisted in rotation of the innominate bone on its own long axis (an axis lying as it were in a direction from the posterior superior spine to the ilio-pectineal eminence), so as to cause the ilium to become more erect (or vertical). In every case with each increment of pubic separation there was increase of the distance between the anterior iliac interspinous diameter and the horizontal level of the symphysis pubis. Roughly speaking, six centimetres of pubic separation gave an increase of one centimetre. An examination of all the results showed that the diameters lying more or less transversely were increased greatly by each centimetre of pubic separation and a very small amount of pubic separation would enlarge these sufficiently to let the fœtal head pass. But unfortunately it was more usually the true conjugate that presented the difficulty, and six centimetres of pubic separation enlarged that only about one centimetre or two-fifths of an inch on an average. Here separation of the pubes increased greatly the transverse diameters and sometimes increased the true conjugate, but it might even diminish the true conjugate. The downward movement of the pubes increased the true conjugate and the rotation of the innominate bones increased the downward movement of the pubes. Walcher's position should therefore be used, though greater effects were obtained with symphysiotomy. With regard to the safety of symphysiotomy Dr. Sandstein especially watched the result of the separation of the pubes on the sacro-iliac joint; in 44 per cent. rupture of the ligaments began below six centimetres of separation, while in 56 per cent. it began at or above that point. In three pregnant women it began only at eight centimetres in two, and not even at that in one. The vulva was greatly affected by the separation of the pubes, the parts between the bones becoming stretched like a drum; up to five or six centimetres the strain was well borne, in only one did a tear occur at six centimetres. After seven centimetres it was evident that there would be a great risk of necrosis and sloughing of the stretched tissues. The bladder and urethra would only be involved secondarily by a tear or through sloughing. Dr. Sandstein collected the results of 300 recorded cases between 1892 and 1898 and found that the danger lay in and around the symphysis pubis. The sacro-iliac joints did not suffer from suppuration or "non-union," though some pain in them was recorded. Lacerations about the vestibule and vulva occurred in 30 cases, hæmorrhage in 38 cases, fistula occurred seven times, local sepsis in 24 cases, and phlebitis in eight cases. 35 deaths occurred and were due to septicæmia or pyæmia in 24 cases and to hæmorrhage in three cases. As a result of his investigations Dr. Sandstein stated that pubic separation should be limited to six centimetres, and as each centimetre increased the true conjugate by 1·67 millimetres, the utmost amount of increase of the true conjugate which could be aimed at was one centimetre, or two-fifths of an inch. Therefore, the cases must be strictly limited to those in which, by an addition of two-fifths of an inch to the true conjugate, they could with safety to the mother deliver a living child by nature alone or aided by forceps or version. The range of forceps was in a true conjugate of from four to three and a quarter inches; symphysiotomy with a maximum of six centimetres separation increased the true conjugate two-fifths of an inch, which when subtracted from three and a quarter inches gave two and seven-eighths inches, or 7·3 centimetres, as the minimum conjugate on which this operation should be performed. Walcher's position should always be used. Sometimes the sides of the pelves moved unequally, with consequent risk of tearing. This could be met by flexing the thigh on the abdomen on the non-moving side, using the bent-up knee of that leg as a lever and abducting it forcibly outwards and downwards; this in his experiments could always make the side share in the movements. The knife should be a broad-bladed one. The symphysis must be completely divided, but division of the sub-pubic ligament should not be aimed at as it prevented extension by tearing of the wound down into the vulva. Rigid asepsis was necessary, and since many fatalities occurred from sepsis in patients with a previous foul vaginal discharge the existence of such a discharge should be considered as a contra-indication to the operation.—Professor A. R. SIMPSON, Dr. HART, Dr. J. W. BALLANTYNE, and the PRESIDENT discussed the paper.

Dr. HART read a paper on a case of Full-term Intact Extra-peritoneal Gestation successfully removed after Five Years' Retention. There was a very clear history of extra-uterine gestation five years before. The physical signs were those of an extra-peritoneal cyst reaching up to the navel. Its presence had given rise to symptoms only produced by the size of the cyst. On operation the cyst contained a thick, grumous fluid, and the bones were either loose or easily detached. There was some flesh and skin on one of the legs and on the scalp. The bones were in a good state of preservation. No trace of the placenta or cord could be found. The sac opening was stitched to the abdominal wound and the sac itself was stuffed with iodoform gauze. The posterior peritoneum had been lifted up as Taylor had described.—Dr. F. W. N. HAULTAIN, Dr. BALLANTYNE, and Professor SIMPSON commented on the case.

Dr. HAULTAIN read a paper on Expulsion of a Dermoid Ovarian Cyst per Vaginam during Labour. The patient was in labour with her third child, and before being seen by Dr. Haultain the pains had continued for 24 hours. A large soft swelling had been detected behind the posterior vaginal wall and an attempt to deliver the child by forceps had been made but ineffectually, the traction resulting in the protrusion of a soft bulging mass from the vulva. On examination afterwards the mass seemed to be free in the canal, and an endeavour to pull it down for inspection resulted in its detachment and removal. No special hæmorrhage occurred and a living child was speedily extracted with the aid of forceps. After expulsion of the placenta a rent was found in the posterior vaginal wall and was treated by packing with iodoform gauze for four days. The patient made a good recovery. Four similar cases were recorded by Luschka, Lomer, Berry, and Trent; in all these cases forceps had been used and all the children were born dead; one mother died. Six cases were recorded of the expulsion of ovarian tumours per anum, and in four of these the result was fatal to the mother. This complication of labour was rare and might be said to occur only once in 4000 cases. If labour were left to the spontaneous efforts of nature a maternal mortality of 50 per cent. was shown; this result indicated the necessity of prompt and energetic treatment. Four methods of management were recognised: reposition of the tumour into the abdomen; assisted delivery of the child, either without diminishing the size of the tumour or after doing so; Cæsarean section and ovariotomy; and vaginal ovariotomy.—Dr. R. G. MCKERRON (Aberdeen), Professor SIMPSON, and Dr. BALLANTYNE discussed the paper and Dr. HAULTAIN replied.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Jan. 10th, Mr. A. Wynter Blyth, the President, being in the chair.—Dr. D. S.

Davies, medical officer of health of the city and port of Bristol, read a paper on Plague Exclusion and Control. The simultaneous occurrence among rats of a disease resembling the plague in man had of late years attracted the attention of epidemiologists who had seen in it an explanation of the spread of epidemics, and at the late International Congress on Tuberculosis this view had been forcibly restated by Dr. R. Koch who insisted on the grave error of attempting to treat all pestilences on the same lines and applying quarantine and disinfection to all indiscriminately instead of combating each as its etiology indicated. The notion that personal contact was the chief factor in the propagation of the plague had been accepted by the international conferences with, as the experience of recent epidemics showed, but little success, since they now knew that it was the pneumonic form only that was often directly communicable. But in every outbreak that had been properly investigated rats had been proved to be the active agents and with their extermination the disease had disappeared. Yet this view, though accepted by all epidemiologists, had been met by the authorities in every country with more or less of passive obstruction, and even the Indian Government had failed to distinguish clearly cause and effect. It was high time that this fact should be generally known and acted on, for otherwise sanitary measures and inoculations were of no avail. Referring to Dr. Ashburton Thompson's report, Dr. Davies said that at Sydney the agency of rats was obvious and indisputable, but nowhere had this precaution been adopted until it was too late. There the plague had been introduced and spread by rats, and the negligible influence of contagion was seen in the fact that the 289 cases were distributed through 276 houses. A plague "contact" was not one who had been exposed to infection by plague patients but to plague rats. The regulations of the Local Government Board of November, 1896, were well enough as regards the importation of the disease by infected persons, but they wholly ignored its introduction by means of rats, especially in ships with cargoes of grain or cotton-seed. The first official recognition of the danger arising from the introduction of the plague by rats was the Order of April, 1901, which advised port sanitary authorities to take precautions against the landing of rats from plague ships, and recommended their destruction and the cremation of their bodies without handling. The Order was, however, not compulsory and was applicable only when the existence of the disease on board was established, but it had the effect of strengthening the hands of the authorities. In Bristol they kept a register of infected ports, based on the lists published by the Marine Department of the United States of America, but retaining the names on the list three or four months longer, since such ports were officially declared free when the disease had disappeared among the human population. All such vessels were considered "suspects," though no cases had occurred among the crew, for the disease might be confined to the rats and communicated by them to the labourers who alone handled the cargo. Thousands of infected rats were at present carried from port to port and permitted to infect freely those on shore, a practice as irrational as would be the isolation of every case of hydrophobia in man while troops of rabid dogs were allowed to remain at large. All rats should be destroyed while the ship was empty and others prevented from going on board, the feasibility of this having been proved by Dr. Ashburton Thompson in the Australian ports, where all vessels were fumigated while empty and none were allowed to enter a port without a certificate from that of departure. Turkey alone had taken any steps in this direction, but an international agreement only would be really efficacious. The Bristol Chamber of Commerce had carried at the meeting at Nottingham a resolution for the framing of regulations for ridding all ships of rats at infected ports, which, with similar recommendations from port sanitary authorities, from the British Medical Association, and from the Society of Medical Officers of Health, had been forwarded to the Board of Trade, the Local Government Board, and the Shipowners' Association, but by none of these had it been taken seriously. At present they could attack the rats only at the port of arrival, a course obviously less effective than their destruction at the infected port. If the plague were once introduced the measures to be adopted were: (1) provision for the isolation of the sick, though there was little danger except from pneumonic cases; (2) the quarantine of "contacts"—i.e., of persons who had been in contact with plague rats; (3) protective inoculation of those associating with the sick or employed in infected premises; (4) the exclusion of all rats from dwelling-houses by the putting into thorough repair of all old stone sewers, house drains, and yards and basement floors, the latter by the owners and the former by the sanitary authorities; (5) the resolute extermination of all rats in ports and warehouses, as was the duty of the authorities in Western Australia: and (6) the cleansing of "verminous" persons. The only "sanitary" measures, in the ordinary sense of the word, that were of any use were the repair of defective drains and the closure of rat-holes.—Dr. Ashburton Thompson (Sydney) insisted on the necessity for an international agreement as to the destruction of rats on board ships from infected ports, since they might be dying from the plague and might carry it from port to port while none of the crew were attacked. The Indian Governments attached the most importance to infected persons and things, the Australian Government to rats, and the result of the application of this view in the suppression of the outbreak at Sydney, the first treated on modern principles, afforded ample justification. Whatever difficulties might be met with in densely peopled insanitary eastern cities, what had been accomplished in the purely English towns of Australia might be so in those of Europe.—Dr. R. A. Farrar (special plague officer with the Government of India) defended the natives of India, maintaining that in their persons they were cleaner than the lower classes of this country. Neither European nor native attendants contracted the disease in the hospitals and the greater susceptibility of the native was in part due to their habit of going barefoot and wearing toe rings. Infection mostly took place through breaches of the skin or abrasions, and thus while inguinal buboes were most frequent, in the women who swept the floor with their hands they were more often axillary. On board ship the barefooted lascars should, he thought, be treated as "contacts," though the well-shod European was not. Rats on infected ships, or during epidemics those killed on shore, should be promptly plunged into strong solutions of corrosive sublimate or carbolic acid to destroy the fleas, and he would suggest funnel-shaped, rather than discoid, shields to prevent the passage of rats along the hawsers.—Dr. Herbert Williams (Port of London) entirely agreed with Dr. Davies that the ideal course was the destruction of the rats at the infected port of departure, but masters of vessels would not take the trouble and consular certificates were of little worth. In the port of London they had tried burning sulphur and cylinders of compressed sulphur dioxide, but the former was uncertain and the gas tended to imperfect diffusion, so much so that rats in cages six feet from the cylinders had been found alive. Much greater, but not complete, success had been attained with the Clayton Disinfecting Company's apparatus, which impelled the gas by a fan through pipes into the hold, while for disinfection the return air was passed over burning sulphur. The total extermination of rats on shore was impracticable, though he understood that at Odessa over a million had been killed recently. The isolation of vessels was beset with difficulties, as was the use of cranes and lighters, to say nothing of gangways, and with every precaution the rats might be landed in cargo. He had seen a hundred escape from a broken cask.—Dr. E. W. Hope (Liverpool) dwelt on the extreme difficulty of dealing with vessels of 4000 or 5000 tons, in which the rats passed from hold to hold during the fumigation. The Local Government Board might, he thought, inquire into the efficacy of different methods and empower port sanitary authorities to detain rat-infested ships. He had found the American company's apparatus very successful with empty vessels. He could not ignore sanitary measures altogether when he considered the class of persons who in Oporto and in Glasgow were the first to be attacked, and he believed in the communication of infection from such persons by means of fleas.—Dr. E. Walford (Cardiff) had had but two cases under his observation; one of the patients contracted the disease in Cardiff, and the other elsewhere, but each had been attacked while unloading grain-ships, and the former, whose buboes were axillary, had handled dead rats which were proved by bacteriological examination there and in London to have died from plague. He had been successful with the Clayton apparatus, but was well pleased with the work of professional rat-catchers.—Dr. J. Howard-Jones (Newport, Mon.) and some other members and visitors having continued the discussion Dr. Davies replied briefly.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A meeting of this association was held on Jan. 10th, Dr. John Macintyre, F.R.S. Edin., the President, being in the chair.—Dr. Wyatt Wingrave

exhibited a young man, aged 18 years, who had been the subject of (unilateral) Acute Cellulitis of the Larynx, believed to be due to a foreign body.—Mr. Lennox Browne exhibited a female patient, aged 14 years, the daughter of a medical practitioner, who had been the subject of Adenoids, and in whom deafness, almost inarticulate speech, mental hebetude, and chorea were prominent symptoms. After removal of the adenoids the patient, with the consent of Dr. Ferrier, had undergone breathing and movement exercises which had led in two months to the doubling of her vital capacity, increase of her chest girth, cure of her chorea, and very marked improvement in her speech and intellect.—Dr. W. Culver James showed a female patient, aged 18 years, suffering from Aphonia, with loss of Speech.—Mr. Mayo Collier exhibited a female child, aged nine years, the subject of Defective Speech, associated with Defective Hearing almost to the extent of deaf-mutism, in whom great improvement in both conditions had followed on the removal of a large mass of impacted cerumen which had probably accumulated and been undetected in consequence of a curious abnormality in the meatus.—Mr. Lennox Browne exhibited five patients the subjects of Lingual Varix, one of whom was a medical practitioner; the other four had been sent to him by hospital colleagues as examples in patients at present attending the out-patient department, a point emphasised by the President.—Mr. Mayo Collier referred to an extreme case of Paroxysmal Dyspnœa, the sole reason for which appeared to be lingual varix. Treatment by the galvano-cautery had resulted in a remission which had now lasted for three years.—Dr. Atwood Thorne exhibited a patient with Deafness associated with Nasal Stenosis and Hyperostosis at the Isthmus of the External Auditory Meatus.—Remarks were made on this case by the President, Mr. Mayo Collier, and Dr. Wyatt Wingrave.—Mr. W. J. Chichele Nourse showed a case for opinion which, having many signs of a Malignant Growth of the Left Vocal Cord, had so improved under biniodide of mercury as to suggest its being a gumma.—The President suggested that the case should be watched and further reported on at the next meeting.—Mr. Lennox Browne read the notes (1) of two cases of Acute Ulcerative Tonsillitis, which had been followed by orchitis, with an acute pustular inflammation of the skin of the penis and the scrotum; and (2) of a case of Posterior Tongue-Tie, with Hypertrophy of the Lingual Tonsil, occurring in a female board school teacher, aged 23 years. A drawing illustrated that the epiglottis stood up, showing all its glossal surface, as well as the lingual tonsil. Removal of the latter and snipping of the central glosso-epiglottic fold resulted in immediate restoration of the parts to the normal.—Dr. P. H. Abercrombie, who had seen the patient both before and after treatment, testified to the striking peculiarity of the appearances as witnessed before and after treatment.—Mr. Lennox Browne also read notes of a case of Pulmonary Tuberculosis in which, bacilli being numerously present, the patient showed continuous gain of body weight during four years of observation.—Dr. Wyatt Wingrave spoke of the histological characters of the bacilli in this case, remarking especially on their tendency to degeneration with development of fresh organisms, and from the presence of pus corpuscles he believed the case to be one of localised pulmonary abscess of a tuberculous nature.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 1st, Dr. E. C. Kingdon, the President, being in the chair.—Dr. G. M. Lowe of Lincoln read a paper on the Use of X Rays in Medicine and Surgery. He used the current from the city main at 230 volts pressure controlled by two of Con's electrolytic breaks coupled in series. With a current of from nine to 11 ampères and at a distance of from 14 to 24 inches of the anode from the plate he got excellent negatives in from five to 30 seconds. The prints exhibited were on Otto paper showing perfect proportion and exquisite detail. Dr. Lowe laid great stress on the importance of a uniform method of work, the anode always being plumb over the part to be radiographed and both sides symmetrically exhibited so that the surgeon could interpret the results correctly. In medicine he had found the rays useful in the diagnosis of hæmatoma, aneurysm, enlargements of the heart, the spleen, and the liver, as well as in renal and vesical calculi. He had frequently observed splenic enlargement amongst the so-called dyspeptic clerks and other employés working in the large foundries on the banks of the Witham, where the subsoil was a wet sand overlying a thick bed of peat. He described a case of Lupus Vulgaris (previously twice scraped) which was now quite healed after about 17 applications of the x rays at a distance of six inches from the part, the rest of the face being protected by a metal mask. After describing and comparing with each other the Finsen ultra violet rays, the Bergused rays, and the x rays, Dr. Lowe showed that all radio-active agencies had at least one property in common—viz., their power of ionising the air—i.e., of rendering the air a conductor of electricity, as shown by the gold leaf electroscope. Lord Kelvin had demonstrated that a bar of iron loaded with positive electricity and insulated by paraffin wax could be discharged or de-electrified by the x rays, and Dr. Lowe put forward the probable theory that this property acting on a limited area of skin and subjacent tissues, when the tube was brought within a few inches from the surface, was the cause of dermatitis and other therapeutic results by acting on the trophic nerves of the parts. X-ray workers were, he stated, daily meeting with remarkable effects which when collected and formulated would revolutionise certain branches of therapeutics.—At the conclusion of Dr. Lowe's address Dr. C. H. Cattle, Dr. J. S. Bolton, Dr. F. H. Jacob, Mr. A. R. Anderson, Dr. F. D. Blandy, Mr. Simpson, and the President spoke on the subject, and Dr. Lowe replied.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 26th, 1901, Dr. John Stewart, the President, being in the chair. According to arrangement the meeting was an open one for professional conversation, and the subject suggested for discussion was, What are Scheduled Poisons? In view of recent proceedings of the General Medical Council great interest in the question was manifested, and attention was drawn to the dubiety existing in many minds as to the drugs regarded as poisonous within the meaning of the Pharmacy Acts. After a lengthy discussion it was resolved to appoint a committee to inquire as to what drugs were included under the term "scheduled poisons," and especially those described in the Acts as "poisonous vegetable alkaloids and their salts."—The President, Dr. J. Forrester, Dr. T. Russell, Dr. C. E. Robertson, Dr. D. Young, Dr. J. Fraser Orr, and Dr. A. Wauchope were elected to form the committee, with power to add to their number, and were instructed to report the result of their investigations to a future meeting of the society.—The meeting then proceeded to consider the recent edict of the General Medical Council with reference to the keeping of open shop or medical halls and unqualified drug assistants. After some discussion it was unanimously resolved to protest as a society against the terms of the edict. The council of the society was instructed to draw up a protest for presentation to the General Medical Council at its next meeting.—The ninth meeting of the society of the present session and the first of the new year was held on Jan. 9th, Dr. Stewart, the President, being in the chair. The meeting took the form of a smoking concert, supper, and conversazione. There was a good attendance of members and friends. Supper was served at 9 o'clock, after which an adjournment was made to another room where a pleasant evening was spent in song and story.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fourth meeting of the session of this society was held on Jan. 8th, Dr. Barclay J. Baron, being in the chair.—Mr. C. K. Rudge was elected on the Library Committee in the place of Mr. L. M. Griffiths resigned. A cordial vote of thanks was passed to Mr. Griffiths for having acted as librarian for so many years.—Dr. F. W. Crossman showed a patient with a loud Aortic Bruit.—Dr. T. Fisher, Dr. P. W. Williams, Dr. E. J. Cave, Dr. E. H. E. Stack, Dr. J. Michell Clarke, Dr. A. J. Harrison, and Dr. Newman Neild spoke on the condition.—Mr. G. Munro Smith showed the following specimens: (1) Concretion from a Horse's Intestine; (2) Renal Calculi; (3) a Tonsillar Calculus; and (4) Necrosis of the Clavicle (the patient was shown).—Mr. J. Handcocke Wathen showed a series of Concretions from Horses' Intestines.—Mr. W. Roger Williams, Dr. Cave, Dr. T. Fisher, Dr. E. Markham Skerritt, Dr. W. K. Wills, Dr. Williams, and Dr. R. Shingleton Smith discussed the specimens.—Dr. Stack showed a specimen of Aneurysm of the Internal Carotid Artery at the Base of the Brain from a girl, aged 22 years.—Dr. Fisher showed specimens of Acute Tuberculosis of the Lungs following Tuberculous Peritonitis.—Dr. F. H. Edgeworth read a paper on Transient Renal Hæmorrhage

due to Chill.—Dr. Wills, Mr. Roger Williams, Dr. Williams, Mr. J. Taylor, Dr. Smith, Dr. Stack, Dr. Clarke, Dr. Skerritt, and Dr. Harrison discussed the paper.—Dr. J. Odery Symes read a paper on Some Urinary Infections, with special reference to their Treatment by Urotropin.—Mr. T. Carwardine, Dr. Fisher, Dr. Neild, Dr. Cave, Dr. Stack, Dr. Edgeworth, and Dr. Harrison spoke on the paper.—Dr. D. S. Davies gave a short report on a recent case of Black Small-pox in Bristol.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting of this institution held on Jan. 9th the following office-bearers, members of council, and committees were elected:—President: Mr. Rushton Parker. Vice-Presidents: Dr. Edward Adam, Dr. J. M. Hunt, Dr. John E. Gemmell, and Dr. W. Permewan. Honorary treasurer: Dr. H. Briggs. Honorary general secretary: Dr. J. R. Logan. Honorarysecretary to ordinary meetings: Dr. J. Hill Abram. Honorary librarian: Dr. Leslie Roberts. Council: Dr. James Barr, Dr. R. J. M. Buchanan, Mr. G. A. Hawkins-Ambler, Dr. W. Macvie, Dr. E. Nicholson, Dr. J. Lloyd Roberts, Mr. Edgar A. Browne, Dr. W. M. Cairns, Dr. D. Douglas-Crawford, Dr. J. Ernest Nevins, Professor C. S. Sherrington, and Dr. W. B. Warrington. Pathological and Microscopical Committee: Professor R. W. Boyce, Mr. R. A. Bickersteth, Dr. R. J. M. Buchanan, Dr. D. Douglas-Crawford, Dr. John Hay, Dr. C. J. Macalister, Mr. K. W. Monsarrat, Mr. G. P. Newbolt, Professor Sherrington, and Dr. Warrington. Journal Committee: the honorary secretary to ordinary meetings, the honorary secretary of the pathological section, Dr. F. H. Barendt, Mr. F. C. Larkin, Mr. Newbolt, Professor A. M. Paterson, Mr. W. Thelwall Thomas, Dr. Arthur J. Wallace, and Dr. Permewan. Auditors: Dr. J. Lloyd Roberts and Dr. Dawson.

BRITISH ELECTRO-THERAPEUTIC SOCIETY. — A meeting of this society was held on Jan. 10th, Dr. W. S. Hedley being in the chair, at which a list of 58 medical men was read as constituting the members of the above society. The rules suggested by the provisional committee were discussed and the majority of them passed. A few amendments and additions are to be brought forward for confirmation at the next meeting on Feb. 14th. The following officers were then elected:—President: Dr. W. S. Hedley. Vice-Presidents: Dr. Lewis Jones and Dr. H. G. Turney. Council: Dr. A. Barry Blacker, Dr. Wilfred J. Harris, Dr. George Herschell, Dr. Septimus P. Sunderland, Dr. Hugh Walsham, Mr. William Armstrong, Dr. J. Allan, Dr. James Barr, Mr. J. F. Hall-Edwards, Dr. Robert Jones, and Dr. Ernest Solly, with power to add to their number. Honorary treasurer: Dr. H. McClure. Honorary London secretary: Mr. Chisholm Williams. The annual subscription is one guinea and there will be eight meetings in the year. A journal will be published quarterly. Medical men desirous of joining should send their names to the honorary secretary, 20, Bedford-square, London, W.C.

THE ROYAL INSTITUTION.—In the fifth of his Christmas lectures on Waves and Ripples, delivered on Jan. 7th, Professor J. A. Fleming dealt with the subject of electric oscillations and electric waves. He described the production of Hertzian waves and said that the essential principle of the coherer had been discovered by several persons. Professor Hughes observed a phenomenon of this kind in 1879 or 1880. It was afterwards found that the apparatus was rendered more sensitive by substituting metallic filings for the discs previously used, and one form of the instrument used by Marconi in his wireless telegraphy was constructed on this system. In the sixth and concluding lecture, delivered on Jan. 9th, Professor Fleming said that electric waves could be refracted by metal plates and could be brought to a focus by lenses of paraffin wax, just as light was brought to a focus by glass lenses. Water was opaque to electric waves, but they could be refracted by a prism of ice provided that its surface was perfectly dry. The various classes of waves in the ether might be considered as forming a sort of gamut or scale, having at one end (that with the shortest wave-lengths) invisible but chemically actinic ultra-violet rays, then the luminous spectrum, then the rays of dark heat beyond the red end of the spectrum, followed at a considerable interval by Hertzian or electric waves of different lengths.

Reviews and Notices of Books.

Lectures on the History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries. By Sir MICHAEL FOSTER, K.C.B., M.P., M.D. Lond., D.C.L., &c. (Cambridge Natural Science Manuals.) Cambridge: The University Press. 1901. Pp. 310. Price 9s.

IT is probable that there is no one man so well fitted as is Sir Michael Foster to write the history of the subject which has made his name familiar to physiologists all over the world. No epoch-making discovery, no special line of research, is associated with his name, but by general consent he knows physiology as few others know it. We are therefore not disappointed, on turning over these pages, to find a luminous criticism of the physiology of the past and an instructive lesson in the methods by which our present knowledge has been attained—a lesson not confined to physiology but applicable to every department of science. It is, indeed, the history of scientific progress in general with which Sir Michael Foster is compelled to deal in his lectures. The history of physiology is so closely interwoven with the histories of anatomy, chemistry, and physics that they cannot be considered apart. Pathology and medicine are so intimately based on physiology that these lectures give us their earlier history too. The broad general lesson conveyed is that the one method which has ever yielded solid and lasting result is that of faithful observation and thoughtful experiment.

The lectures here printed were delivered in San Francisco in 1900. They represent an amount of research and learning which have extended over many years of the writer's life. There is no attempt to cover the whole history of physiology even within the limits of the three centuries under consideration. The plan followed is that of selecting certain branches of the subject, such as circulation, digestion, and respiration amongst others, and dealing with them very fully. Each branch is naturally associated with the names of those great pioneers who laid the foundations of our knowledge concerning it, and biography is pleasantly mingled with history. The result is something far more engrossing and delightful than the dry bones of history alone, and if only for this reason something much more instructive. We gain a living picture of those far-off workers and are enabled to form an idea of their mental attitude towards the problems which confronted them. To say this is to give the highest praise which can be bestowed upon a scientific historian. It is easy to chronicle discoveries and their dates and to prove that someone stole the ideas of somebody else, but to enable the reader to stand, as it were, in the shoes of Vesalius, Harvey, or Van Helmont, and to limit his scientific conceptions within their narrower purview, and to grope with them into the darkness, is an achievement of no common order, and it is this which Sir Michael Foster has succeeded in doing.

Commencing with the life and times of Vesalius we read how this great observer laid the foundations of modern anatomy—the first effective revolt against a blind adherence to tradition. We follow the influence of his teaching and learn how it led up, through Cæsalpinus, Fabricius, and others, to Harvey's great discovery. We read of the rise of modern physics and of how in the hands of Borelli many physiological problems received a physical explanation. We learn how Malpighi founded the science of histology and how our ideas of glandular secretion took origin. The rise of chemical physiology from the days of Paracelsus, through those of Van Helmont, Sylvius, and Stahl, is dealt with in two chapters in which the physiology of digestion takes an important place. We may well be proud of the share taken by Englishmen in the development of natural science and of

the work done by them in the seventeenth century when the Royal Society was founded, when we read of the contributions of Boyle, Lower, and Mayow to physiological knowledge. Space fails us to deal with other lectures in which the writer traces the further advances made in our knowledge of digestion by Boerhaave, Haller, and Spallanzani; the explanation of the true meaning of respiration which followed the chemical discoveries of Black, Priestley, and Lavoisier; and the older views concerning the processes of the nervous system. We must be content to commend Sir Michael Foster's book, not only to every physiologist and medical man, but to everyone interested in science, as a valuable lesson in the methods of scientific research and a delightful piece of literature.

Text-book of Medicine. Begun by the late CHARLES HILTON FAGGE, M.D. Completed after his death and since Revised or Re-written by PHILIP HENRY PYE-SMITH, M.D. Lond. Fourth edition. Vol. I. London: J. & A. Churchill. 1901. Pp. 1123. Price 21*s.*

A REVISION of "Fagge" radical and far-reaching enough to entitle this classic work to compete successfully with the up-to-date and progressive works of present-day medicine naturally conveys to the mind of its admirers a conception of so great a sacrifice of method and tradition that "Fagge" thus resurrected would be "Fagge" no longer. It must, however, be remembered that in the present instance the revision has been undertaken and carried through in no spirit of impious vandalism, but by the same master-hand which created "Fagge" and invented its traditions. Dr. Pye-Smith's paternal conservatism has saved this treasured volume from the heroic treatment which a more modern author catering for the vulgar, hurried needs of the twentieth century student would doubtless have felt constrained to administer. The leisurely style of the original "Fagge," the historical allusions, the etymological notes and references, the quotations from century-old authors, from Celsus, from Hippocrates, from Galen, and a host of others—all of them find a place in the new as in the older editions. Those who learned their medicine when "Fagge" was the only text-book for the student with ambitions, can have no quarrel with Dr. Pye-Smith for perpetuating in his most recent edition the traditions which they love and reverence. But what of the modern student? Will he appreciate, or has he indeed time to appreciate, the refinements and niceties of style or the discursive experiences of what is now practically a past generation of clinical physicians?

At the time of his death in the year 1883 Dr. Fagge left behind him a vast collection of notes and manuscript, collected mainly from Guy's Hospital reports or as the fruit of his own experiences inside and outside the hospital. This work had occupied his best energies for more than 12 years, so that even when Dr. Pye-Smith undertook, at the request of Mrs. Fagge, the Herculean task of editing the proposed volumes, much of the material and its pathological bearings was already in scientific arrear. In spite of the invaluable assistance of the late Dr. J. Cavafy in the earlier editions, and of Dr. J. F. Payne in the one under review, this scientific arrear has never been made completely good. The discursive style which we have already mentioned as being perpetuated in the present volume does not lend itself to the scientific precision which modern pathology and modern nosology demand, and there is repeated evidence throughout the pages of this first volume that a half-hearted attempt to reconcile traditional speculations with newly ascertained facts has brought the continuity of argument to a condition which nearly approaches chaos. For instance, the chapter on Inflammation, evidently written and revised up to the standard of current opinion of some six or seven years ago, represents a valuable and accurate account of this pathological process according to the views then held. Within recent years, however, our views on inflammation have undergone radical modification, and as a graceful concession to the modern pathology Dr. Pye-Smith adds a paragraph at the end of this chapter which not only casts doubt upon the soundness of the views expressed in the previous 20 pages, but practically nullifies everything which depends on the definition of the term "inflammation" as accepted by him and stated at the commencement of the chapter. Seeing how large is the part which inflammation plays in the pathology of diseases dealt with in this volume, it is unsatisfactory, to say the least, that the foundation should be beset with these ambiguities. The distinction between degenerative changes and inflammatory processes is admittedly a matter of great difficulty, and in no department of medicine is this more apparent than in that of diseases of the central and peripheral nervous systems. Here, again, we cannot admit that Dr. Pye-Smith has always made the position clear. And in this connexion we would quote two passages in different sections of the volume which, if not absolutely contradictory, at least present a confliction of views. Referring to the lightning pains of tabes on page 560 Dr. Pye-Smith says: "In all their characters they are true neuralgias and they are not due to demonstrable lesion of the nerves," while on page 700 in the same connexion he says: "The peripheral afferent nerve-trunks, as well as their roots, are affected; ..... the boring and flashing pains, no doubt, are caused by morbid changes in the posterior root-zones."

Although, as we are told in the preface, at the present time there is scarcely a page of the late Dr. Fagge's work as he left it at the time of his death, nevertheless the passages which deal with the anatomy of enteric fever, the clinical account of variola and scarlet fever, the course of malarial fever, the description of neuralgia and migraine and of epilepsy and bronchitis appear very much as they were presented in former editions. The introductory sections on general pathology and those on diabetes, rheumatism, osteo-arthritis, diphtheria, tabes dorsalis, and several others have been completely re-written for the present volume.

The chapters on Gout, Beri-Beri, Rickets, and, we may add, Rheumatism, including as they do departments of medicine in which much new work has been published and many theories have been expressed, will strike the reader as pedantically old-fashioned for a modern text-book. For instance, as regards gout we may question whether "the primary fact" to be kept in mind in considering this disease is the excess of urates in the blood. On this pathological pivot, however, the symptoms, morbid anatomy, and etiology are almost entirely explained. The definition of gout as a disease characterised by the deposition of insoluble urates in the cartilages of joints and subcutaneous tissues is narrow enough in all conscience to exclude bronchitis, dyspepsia, gastralgia, iritis, cystitis, urethritis, phlebitis, and eczema from the list of symptoms and manifestations often included among the syndromata of the gouty diathesis. At a period of medical history when the deposition of insoluble urates is generally regarded as one of the manifestations, and not the essence, of gout this careful differentiation of what are usually held to be associated symptoms from the primary disorder is dogma of a most pronounced type.

In reference to rheumatism, which is defined as an acute febrile disorder running an undefined course with implication of the joints and often of the heart, Dr. Pye-Smith does not declare in favour of a specific origin. At the same time he hesitates to associate it with the arthritic diathesis or the disorders of metabolism. In adopting a somewhat *non-possumus* attitude towards every theory which has so far been suggested he leaves the reader in a condition of nebulous speculation. The short chapter on beri-beri leaves the reader in a similar condition of doubt, as may be inferred

from the following sentence: "The pathology of beri-beri is uncertain; it is certainly not a form of malaria nor of scurvy, nor it is caused by any poisonous food; it does not depend on the presence of animal parasites." The article on rickets, unlike that on gout, is founded on a much broader pathology and contains an unusually full account of the methods of treatment. The following quotation is not, however, suggestive of modern methods: "When a feeding-bottle is used the most extreme care is required to keep it and its tube clean." It is unfortunately too often true that "tubes" and rickets are found associated in the same nurseries, but that "tubes" should be seriously discussed in a modern text-book which is for the instruction of the coming generation of practitioners is, to say the least, disappointing.

Up to this point we have taken the obvious line of criticism which on general grounds would suggest itself to a reviewer who has to deal with a text-book which first saw light nearly 20 years ago and is now for the fourth time published under the same editorship and under an editorship which is single-handed and self-reliant. There is, however, an altogether different standpoint from which this new edition may be approached, and many serious students will no doubt regard it in this view—namely, that the art of drawing accurate and striking pictures of disease, an art of which each succeeding edition of "Fagge" has given more brilliant and speaking examples, is so rapidly disappearing that it is the positive duty of those older clinicians who still retain this facility of description to give the world the benefit of their skill. Fagge's Medicine is, so far as we know, the only text-book of its kind which at the present day presents the clinical aspect of disease in a style which Sydenham, that great master of descriptive medicine, would have approved. For this reason if for no other, we, as a nation and as a profession, owe Dr. Pye-Smith a debt of gratitude, for with untiring efforts he has remodelled for contemporary use perhaps the greatest text-book of clinical medicine which has ever been published in any language.

Matière Médicale Zoologique: Histoire des Drogues d'Origine Animale. Par H. BEAUREGARD. Revisé par M. COUTIÈRE, avec Préface de M. D'ARSONVAL. Paris: G. Naud. 1901. 8vo. Pp. 396. With five Plates and 145 Figures in the text. Price 12 francs.

THIS work is a comprehensive treatise upon those animals whose products are, or were recently, used in pharmacy. But it is not limited to a disquisition upon the drugs themselves and upon the animals and organs whence they are extracted; the author, who unfortunately did not survive to see his work in print, gives also the generalities of the several groups, orders, and families of the animal kingdom the members of which have provided mankind with drugs. The treatise, in fact, is one upon general zoology so far as concerns the main sub-division of the animal kingdom. It is accompanied by abundant illustrations of outward form and internal structure, with naturally a special prominence given to the anatomy and histology of those glands whence the drugs are derived. It will astonish the non-expert to observe how many different kinds of animals contribute to the healing of man's infirmities. The list is not perhaps so long as was that of a mediæval physician in Europe or a Chinese doctor of to-day; but it is by no means short. Altogether some 50 kinds of animals figure in M. Beauregard's list, and of these the majority are mammals. Next in numbers are insects, fishes come third, while reptiles, crustacea, worms, and sponges furnish but one or two representatives each of creatures whose flesh or skeletons provide drugs. While viverreum (the product of civets and genets), castoreum (derived from the beaver), and hyraceum (really the excrement of the hyrax) are no longer used in medicine, the musk of the musk-deer is still, though rarely, given as a drug in cases of "intense general depression." But in this and the other secretions already referred to the physiological action has not been studied. It is, after all, much on the same level with the recently reputed cure for cancer in the shape of violets. M. Beauregard gives, in fact, an example of a drug which has this kind of reputation. It was asserted that the hoofs of the elk were "efficacious as a remedy for epilepsy." This example brings us to the consideration of M. Beauregard's selection of drugs. It is not quite clear why he includes such an instance as that which has just been given and why he excludes many of the mediæval and subsequent remedies. The ancients used anything and everything that they could lay their hands upon for the cure of sickness, and the late use of some of the substances referred to by M. Beauregard is possibly to be explained as a survival from antiquity. That unconsciously humorous divine and natural historian, the Rev. Edward Topsell, observed that "the beastes do offer many profitable medecines for the cure of men; which the skilful Physitian must borrow from them if he will be perfect in his art and conscionable in his profession." And he goes on to remark: "I have proved by the inspection of this knowledge that herein is layed the largest foundation of Medicine." If M. Beauregard includes the hoofs of an elk and bezoar stones, why should not he also tell us something about the oil in which a fox is baked alive or dead, "the dust of a living Weasell brent," "a fat cat sod" (whatever that may be), and, especially at the present moment, a shaving of a goat skin mixed with pumice stone and vinegar, which is good for the small-pox? The author seems to us, in fact, to have hesitated midway between alternative modes of dealing with his subject. He should either have given us a large amount of antiquarian drug lore, or resolutely cut out all such animal products as are not used at the present moment in civilised countries. We wonder if many of the readers of the present notice have ever heard of "Ægagropiles"; the term is new, though the objects to which it is given as a name are probably familiar to most persons. An ægagropile is an expression used for those felted balls of hair that are found in the stomachs of many animals, particularly ruminants. They are mentioned by the author in the type which he uses to embody the names of drugs, but no suggestion is made by him as to their present or past use in the Pharmacopœia. When we get to the subject of pepsine we tread on firmer ground, though whether the use of artificial digestives of this kind can be fairly termed drugs is perhaps a matter for argument. Pepsine is, according to the author, especially made from the stomachs of sheep. One of the most interesting of M. Beauregard's chapters is that dealing with spermaceti. As a drug its use is mentioned for the first time in the pharmacopœia of the University of Salerno—the same university which addressed a versified series of remedies to Robert, "King of England." But the Salernites, as the author calls them, confused spermaceti with ambergris, and this confusion, initiated by those well-meaning but officious savants, lasted until the sixteenth century. We have now fully unravelled the complications, and spermaceti, it is perhaps unnecessary to explain, is the fat contained in the great head of the cachalot, while ambergris is a pathological product of its liver which is now used mainly as a vehicle for perfumes, though it possesses a sweet, earthy smell of its own. Sir Thomas Browne, who is not quoted by M. Beauregard, was one of those physicians who was not by any means in advance of his time. His full belief in witchcraft is well known and the consequent cruelties which he condoned. His intelligence in the matter of ambergris was not much better, as the following observation—which, perhaps, we may be allowed to quote—shows: "In vain," he wrote of a sperm whale

cast up on the shore of his native county, "it was to rake for ambergriese in the paunch of this leviathan, as Greenland discoverers and attests of experience dictate that they sometimes swallow great lumps thereof in the sea—insufferable fetor denying that inquiry." Olaus Magnus, the Archbishop of Upsala, thought ambergris a good specific for syncope and epilepsy. M. Beauregard declines to recommend it for anything except as a doubtful aphrodisiac. A remarkable instance of a drug which has apparently persisted from primitive pharmacopœias to the present day is afforded by the common river crayfish. In the stomach of that creature are certain slimy concretions known as gastroliths. Such a structure, not always present in the animal and of rather mysterious import in its economy, is precisely the kind of thing that the mediæval physician would set great store by. These gastroliths or "crab's eyes," as the more vernacular term runs, are still pounded up and mingled with various powders which are referred to by M. Beauregard. It is not until we get quite near to the end of the book that the author grapples with an animal product which is really of use and which has been investigated chemically, physiologically, and therapeutically. This substance is cantharidine, formed from various species of beetles; these beetles are represented in two excellent coloured plates.

We have attempted to give some notion of the contents of this volume. It has most emphatically interested us in its perusal and will certainly interest others. Whether it is wanted, in the grosser utilitarian sense, is another matter altogether.

The Criminal. By HAVELOCK ELLIS. Third Edition, Revised and Enlarged, with 40 Illustrations. London: Walter Scott. 1901. The Contemporary Science Series.

IN this volume the author has made an attempt to present to the English reader a critical summary of the results of the science now commonly called criminal anthropology. We have perused the book with considerable interest and can recommend it to those who wish for information on a difficult subject considered both from a scientific and a social point of view. That the work has reached a third edition is evidence that it has supplied a want.

Mr. Ellis points out that the great question which the criminal anthropologist has to answer is, "What is a criminal? Is he—according to the old legal assumption on which our criminal law is still mainly built up—a normal person who has wilfully committed an abnormal act? Is he the victim of acquired disease, such as some form of epilepsy? Is he an atavistic reappearance of the savage in modern society? Is he a 'degenerate'?" Mr. Ellis discusses these matters in an intelligible and attractive manner. He believes that the criminal, in some of his most characteristic manifestations, is a congenitally weak-minded person whose abnormality, while by no means leaving the mental aptitudes absolutely unimpaired, chiefly affects the feelings and volition, so influencing conduct and rendering him an anti-social element in society. The criminal, according to the author, is in a majority of cases certainly not insane, but neither is he normal, and while not wholly insensitive to the motives which influence the normal man he is not affected by them in the same way or in the same degree as the normal man.

The chapters on the physical and psychical sides of criminal anthropology are well written and contain much that is interesting. The question of the treatment of criminals is a difficult one. Mr. Ellis has much to say on the subject, although we must admit that we derived but little profit after reading his remarks, and many able observers are studying the matter critically and carefully. The various methods adopted in different countries seem to give much about the same results, and doubtless the time will come when the investigations now being carried out will bear fruit. The better housing of the working classes, for instance, must have a great influence on criminality. "The worker," says Professor Prins, "is always on the borders of vagabondage; the vagabond is always on the borders of crime." If the stress of misery could be generally decreased the number of criminals would likewise become less. Social organisation is the basis upon which any criminal reform must be formed.

Lehrbuch der Speciellen Pathologischen Anatomie. Von Dr. JOHANNES ORTH, Ord. Professor der Allgemeinen Pathologie in Göttingen. Neunte Lieferung: Auge, bearbeitet von Professor GREEFF. 1. Hälfte, mit 2 lithographirten Tafeln und 76 Abbildungen im Text. (*Text-book of Special Pathological Anatomy.* By Professor JOHANNES ORTH. Ninth Part: The Eye. By Professor RICHARD GREEFF. First half, with two Lithographed Plates and 76 Figures in the text.) Berlin: Hirschwald. 1902. Pp. 270. Price 7 marks.

THE present instalment of Professor Greeff's useful work is divided into five chapters which deal in succession with the Conjunctiva, the Cornea, the Sclera, the Iris, and the Ciliary Body. The account of the conjunctiva naturally commences with a very careful description of the epithelium in the different regions of the conjunctival sac. These regions he distinguishes as the anterior or palpebral area and the bulbar or posterior area, a division that is of great importance from a pathological point of view, for lymphoma or follicles only affect the anterior region which presents columnar epithelium like mucous membranes, whilst cutaneous diseases, as, for example, eczema, which appear in the form of phlyctenulæ on the conjunctiva bulbi, only appear on that region which is covered with laminated pavement epithelium, and consequently resembles the skin in structure. The columnar cells of the anterior region are arranged in two rows, of which the deeper one is flatter than the superficial one, and intermediately lying cells may be occasionally observed. The pavement epithelium of the posterior region presents a deep columnar layer of small cells which are continuous with the much larger columnar cells of the cornea, a middle layer of numerous polygonal cells [with central nucleus, and a superficial layer consisting of one or two flattened cells. Intervening here and there amongst the latter two sets of cells, at first deeply situated, but subsequently near the surface, are scattered goblet cells, which the editor has satisfied himself are, as L. Green contended, unicellular mucous glands, of great importance in the functions of the conjunctiva. Lastly, there are a few leucocytes. The mucous layer of the conjunctiva is divisible into two layers—a superficial or adenoid layer and a deep or fibrous layer. The adenoid layer contains many lymph cells which move about in it with ease and sometimes form small balls which, with von Recklinghausen, he names lymphatic follicles, but doubts whether they are to be regarded as normal elements of the conjunctiva. This layer presents some feebly developed papillæ and is highly vascular, but the fibrous layer contains the majority of the vessels and nerves. The conjunctiva palpebrarum contains the acino-tubular glands named after Krause, of which there are about 40 in the upper and about six or eight in the lower lid. These ducts open at the conjunctiva fornicis. Besides these, Stieda's grooves and ridges are to be noted, which, as Rählmann has shown, first appear two or three months after birth, and are to be found most developed at the line of reflection of the membrane; and, finally, the simple follicular glands of Henle. Proceeding from these anatomical data Professor Greeff describes very precisely the different forms of conjunctival inflammation, and names them according to their etiology, illustrating the statements in the

text with good woodcuts. Thus he differentiates the pneumococcus of Fränkel-Weichselbaum as the cause of one form of conjunctivitis, the Morax-Axenfeld diplo-bacillus as that of another, the Koch-Weeks bacillus as that of a third, and the streptococcus as that of a fourth; the gonococcus of Neisser and the Klebs-Löffler bacillus of diphtheria complete the list. The characters of each of these infectious agents are described in full detail. A coloured plate with the explanatory text shows the characters of conjunctivitis trachomatosa or trachoma. The differing and to some extent incompatible views of J. Müller, Eble, Duvillard, Himly, Berlin and Iwanoff, Leber, Saemisch, Sattler, Rählmann, and several others who have occupied themselves with the pathological characters of trachoma are given. Professor Greeff describes the trachoma follicle as sharply-defined nests or knots of cells lying in the adenoid tissue of the conjunctiva. Blood-vessels penetrate into the mass, which is traversed by a connective tissue framework with fixed connective tissue cells, the whole invested by a feebly developed connective tissue capsule which he depicts. The cells inclosed by the capsule present great variations, lymphocytes, mononuclear and polynuclear leucocytes, phagocytes, and giant-cells being found.

The changes that occur up to the period of cicatrisation are very instructively given. Professor Greeff will in no wise admit the division so often met with in books of follicular and papillary and mixed trachoma. He considers that the infectious agent or bacillus has not been discovered, but he has no doubt of its existence. The author then describes the microscopical features of various forms of conjunctivitis, as of C. veraalis; C. petrificans; C. nodosa, or pseudo-tuberculous conjunctivitis; xerosis conjunctivæ with its bacilli; pemphigus; amyloid degeneration of the conjunctiva; and various tumours of that membrane, as sarcoma, papilloma, adenoma, fibroma, angioma, and cysts, are carefully and fully described in succession.

We have only here given the mode in which the conjunctiva is treated by Professor Greeff and it will be seen how full and instructive his treatise is, but we hasten to add that the pathological conditions of the cornea, sclera, iris, and corpus ciliare are equally well given and that since the appearance of Pagenstecher's "Atlas" no work has equalled it. It will be studied by all ophthalmic surgeons and constitutes a very important addition to our knowledge of the pathology of the eye. We trust that the second part will soon make its appearance.

A Treatise on Surgery by American Authors for Students and Practitioners of Surgery and Medicine. Edited by ROSWELL PARK, A.M., M.D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, &c. Condensed edition, with revisions. With 625 Engravings and 37 full-page Plates in colours and monochrome. London: Henry Kimpton. 1901. Pp. 1262. Price 25*s.* net.

THE valuable treatise on Surgery edited by Dr. Roswell Park and published a few years ago achieved the success which it deserved. It was felt, however, that it was rather large and expensive for the average practitioner or student, and therefore it was decided to issue a smaller edition, while at the same time the opportunity has been taken of revising numerous points. In its present form we may apply practically all the remarks that we made on the original edition in 1898,[1] when we reviewed the work very fully. The chief effect of the contraction of the size of the treatise has been to make it more readable and more handy in use. It is certainly now more fitted for the use of students.

It is natural that we should look to see if any of the points to which we drew attention in reviewing the original edition have been altered. Unfortunately, they have received no notice. We still find "Lister's long splint" when it should be "Liston's"; Celsus is still described as the "prince of Greek physicians," although he lived in Italy and wrote in Latin; and still no mention is made of the value of potassium iodide in the treatment of actinomycosis in the general account of that disease. Of course, these are small points, but it would be well to correct them before another edition appears.

We must also draw the attention of the editor of the work to the statement that "fibrin is produced by the union of two substances, known as fibrinogen and paraglobulin." For many years it has been recognised that paraglobulin has nothing to do with the formation of fibrin.

[1] THE LANCET, Nov. 12th, 1898, p. 1270.

LIBRARY TABLE.

Phototherapy: (1) The Chemical Rays of Light and Small-pox; (2) Light as a Stimulant; (3) The Treatment of Lupus Vulgaris by Concentrated Chemical Rays. By Professor NIELS R. FINSEN of Copenhagen. Translated from the German edition and with an Appendix on the Light Treatment of Lupus by JAMES H. SEQUEIRA, M.D., M.R.C.P.Lond., Dermatological Assistant and Medical Officer in Charge of the Light Department at the London Hospital; Physician to the North-Eastern Hospital for Children. London: Edwin Arnold. 1901. Pp. 79. Price 4*s.* 6*d.*—The three articles on the Action of Light in Disease, which are here presented in an English dress, are recognised as very valuable contributions to the study of a subject which had been greatly neglected by physicians. That light affected the pustulation in small-pox, and that by limiting the light of the sick-room to the red rays the severity of the disease could be mitigated, was held more than two centuries ago, though comparatively recently the idea was ridiculed. Professor Finsen's investigations into the effect of light on small-pox placed the subject on a definite experimental basis. He showed that if only red light be allowed access to the patient the vesicles do not, as a rule, enter upon the stage of suppuration and that hardly any scarring results. This investigation also included a study of the effects, macroscopic and microscopic, of light on the skin, and valuable results were obtained. The second article originally appeared in 1895, and deals with Light as a Stimulant. Professor Finsen made many experiments on the effect of rays of different colours on some of the lower forms of life and found that the chemical rays seemed much more exciting than the red rays; the chemical rays stimulated these animals, tadpoles, beetles, worms, and salamanders, to movement, while they came to rest when only red rays acted on them. The last essay is on the Treatment of Lupus by Concentrated Chemical Rays. The material of this paper has been presented to English readers several times in abstracts and therefore we need say little about it. It will be convenient for many to have a full account of it in English. Dr. Sequeira has written a useful appendix which consists of a *résumé* of a paper by Dr. Forchhammer who is in charge of the clinic at the Finsen Light Institute at Copenhagen. This paper brings the subject up-to-date.

Introduction to the Differential Diagnosis of the Separate Forms of Gall-stone Disease, based upon his own Experience gained in 433 Laparotomies for Gall-stones. By Professor HANS KEHR of Halberstadt. Authorised translation by WILLIAM WOTKYNS SEYMOUR, A.B. Yale, M.D. Harvard, formerly Professor of Gynæcology in the University of Vermont, &c. With an Introduction by Professor KEHR. London: H. Kimpton. 1901. Pp. 370. Price 9*s.* net.—An experience founded on more than 400 operations for gall-stones cannot fail to be of interest to all surgeons, and therefore Dr. Seymour has done well to introduce this work to the English-speaking peoples, among whom it was hardly known. The book consists of two parts. The

first deals with the diagnosis and treatment of the various forms of gall-stone disease. The author lays great stress on an accurate history, and he claims that the diagnosis may be made often merely on the history, and that even if this be not possible the physical examination is greatly simplified by a complete history. This part dealing with the diagnosis is especially good. The author agrees with most surgeons in condemning exploratory punctures; for, as he points out, even without fever pus may be present. Professor Kehr has not much opinion of the value of examination under anæsthesia, for he thinks that much more may be learnt from the history. The second part consists of notes of 100 cases of cholelithiasis in which the author has operated. They have been chosen to illustrate the chief points in diagnosis. They will well repay perusal, even though the reader may not always coincide with the author's opinion or treatment. An appendix give notes of 18 additional laparotomies for cholelithiasis which the author had performed in a little more than six weeks. This statement will serve to show the large number of cases on which he operates. The translation is very accurate—in fact, too accurate, for it follows the original so closely that we find German phrases in English words. The peculiarity of the style is in great part due to Professor Kehr, but the translator might reasonably have modified it. Some of the sentences are almost cryptic, though the meaning can be found by a little thought. We may quote the following as a specimen: "Adhesive peritonitis in the gall-bladder is such an exquisite human disease that I am inclined more to traumatic influences than stones." In spite of these criticisms we may repeat that Dr. Seymour has conferred a benefit on those surgeons who do not know German by translating this book into English.

New Inventions.

FORMALDEHYDE LAMP.

THE experiment of wrapping round the wick of a spirit lamp a spiral of thin platinum wire by which after the flame has been blown out partial combustion is kept up, aldehyde being given off, is a familiar one. By substituting pure methyl alcohol for ordinary spirit formaldehyde is obtained, and on this principle a steady current of the powerfully antiseptic gas may be produced. At the same time water is a product of the change and a moist environment is essential to germicidal action. At any rate this principle is applied with some success in a lamp which we have recently received. It consists of a glass reservoir containing methyl alcohol in which a cotton wick serves to keep two discs of platinum black supplied with the spirit. To start the lamp a light is applied and the spirit is allowed to burn for some minutes until the platinum gets quite hot. The flame is then blown out when it will be found that at certain points the platinum glows feebly and formaldehyde vapour is steadily given off. According to our laboratory experience the lamp works well and without any special trouble. The method seems to be extremely convenient and useful for the diffusion of formaldehyde, one of the most powerful germicides for the purpose, in the air of infected rooms. The lamp is easily kept under control, the quantity of formaldehyde given off being determined by the amount of methyl alcohol consumed. The action of the lamp is stopped by replacing a screw stopper which covers the platinum cap. The lamp is the invention of a medical man in Paris and the agent for its sale in this country is Mr. H. M. Kelly of 10, St. Mary Axe, London, E.C.

Looking Back.

FROM

THE LANCET, *SUNDAY, JAN.* 18, 1824.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

JAN. 16.

Amputation at the Hip Joint.

This formidable operation was performed here this morning, for the first time, by Sir Astley Cooper in the presence of some of the surgeons and pupils belonging to these institutions. The number of those present however, was not so great as on many other occasions, no previous notice of the operation having been given, and this arose in consequence of it not having been determined on but a few minutes before its performance. The patient was a man about forty years of age, whose thigh had been amputated some years ago, just below the knee, since that time the thigh bone had become diseased from the extremity of the stumps, up to the trochanter major; and this disease has had such effects on him of late, that he has been rapidly sinking under it; the thigh was of the middle size; on being asked this morning to submit to an operation, he readily consented. At half-past-one the patient was brought into the operating theatre, and placed in the recumbent posture on the table; the femoral artery, being tightly compressed at the groin by an assistant, (Mr. Key), Sir Astley, standing to the outer side, with the limb in the one hand, and the catlin[1] in the other, commenced the operation, by making an incision just below Poupart's ligament, a little to the iliac side of the femoral artery; this was continued obliquely downwards and outwards to the back of the thigh, about one-third of the way down, from which point the knife was carried in the opposite direction, obliquely upwards and inwards to meet the first incision, by this means, forming an eliptical curve; at this step of the operation, the femoral artery was divided, to which a ligature was immediately applied; the cellular membrane was merely cut through at first, but the knife was again carried in the same direction as before, and thus the muscles were also separated; at this step also, it was necessary to apply another ligature on the inside of the limb; here the operator changed positions, and sat on a chair in front of the patient, and waited a short time to see whether there were any bleeding vessels; after the lapse of a few minutes the operation was continued and very shortly completed, the head of the thigh-bone being removed from the acetabulum without any difficulty; two ligatures in addition to those already used were applied, making in the whole four; the integuments were brought together, and a suture applied to the upper portion; strips of adhesive plaster, and lastly a bandage were put over the stump. There were about 12 ounces of blood lost, but it had the appearance of being venous. The limb was removed in the space of twenty minutes, the securing the arteries and dressing occupied fifteen more; the whole was completed in thirty-five minutes. During the operation the man was extremely faint, but some wine being given him, and fresh air admitted, he recovered. The patient bore the operation with extraordinary fortitude, and after all was finished, he said to Sir Astley, "that it was the hardest day's work he had ever gone through," to which Sir Astley replied, "that it was almost the hardest he ever had."

[1] It may not be unnecessary to explain to the younger generation of our readers that a catlin was a long, narrow, double-edged knife used for amputations.—ED. L.

WELLS (SOMERSET) DISPENSARY.—The annual meeting of the subscribers to this institution was held on Jan. 7th, under the presidency of the Mayor. The financial statement showed a favourable balance. After some discussion it was decided to discontinue the dispensary on its present basis as a charity, and a committee was appointed to report upon the best means of forming a dispensary on provident lines.

THE LANCET RELIEF FUND.

For Members of the Medical Profession and their Widows and Orphans when in Distress.

——:o:——

ALMONERS.

THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.
THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.
THE PRESIDENT OF THE GENERAL MEDICAL COUNCIL.
THOMAS WAKLEY, F.R.C.S. Eng.
THOMAS WAKLEY, Jun., L.R.C.P. Lond.

HON. AUDITOR.

SIR HENRY PITMAN, M.D. Camb., F.R.C.P.

——:o:——

THIS FUND will be provided year by year in the month of January to the amount of at least £300 solely by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to Medical Men, or their Widows and Orphans, *in cases of Acute Distress and Emergency*, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

Applicants must satisfy the Almoners of the Fund that they are qualified under the following regulation:—

> "The recipients shall be such persons as satisfy the Almoners that they possess one or other of the following qualifications—that is to say: (*a*) That the applicant holds a registered medical qualification, and that he has fallen into pressing need of immediate pecuniary relief; or (*b*) That they are persons who have been, previously to the date of application, legitimately dependent upon some person holding a registered medical qualification, and that they have pressing need of immediate pecuniary relief."
>
> (*In the case of Widows and Orphans, in order to come within the scope of the Fund, the death of the Husband or Father must have been of recent occurrence.*)

To ensure the utmost despatch, the "Application Form" upon the other side should be filled up and forwarded (in an envelope superscribed "THE LANCET Relief Fund") to the Secretary, Mr. CHARLES GOOD, THE LANCET Offices, Strand, London, W.C.

The application *must* be accompanied by two separate Testimonials (originals, not copies)—one from the Clergyman of the Parish or other resident Minister of religion, and one from a registered Medical Practitioner. Each Testimonial *must* state—(1) that the application addressed to the Almoners has been read; (2) how long the writer has known the applicant; (3) that the writer believes the statements made by the applicant to be perfectly truthful, and such as may be acted upon without further inquiry; and (4) *may* state any other particulars that the writer desires to place before the Almoners.

Testimonials written for the Almoners of the Fund will in no case be returned.

Private and Confidential.

APPLICATION FORM.

To the Almoners of the Lancet Relief Fund.

The applicant should here state shortly:—

1. The nature of the emergency that has arisen.

2. The circumstances out of which it has arisen.

3. The amount of the grant desired, and whether by way of loan (free of interest) or of gift.

4. If by way of loan, state when the loan will be repaid; and from what source the funds to repay it are expected to be forthcoming.

Continued on page 172 C.

5. Whether the applicant is entitled or able in the circumstances which have arisen to look to any other source of assistance; and if so, what is the expected nature and extent of such assistance.

6. Whether the applicant is receiving, or has received during the past six months, pecuniary aid from any Medical Charity.

7. State how the applicant is qualified to receive assistance; vide regulation* on first page.

8. Particulars of:

Applicant's age _____

Number in family _____

How many are self-supporting _____

How many are partially dependent _____

How many wholly dependent _____

Applicant's Signature _____

Address _____

_____

Date _____

Continued from page 172 B.]

*No.*_____

THE LANCET RELIEF FUND.

*Name*_____

*Address*_____

_____

*Received*_____

*Considered*_____

*Result*_____

*Date*_____

THE LANCET.

LONDON: SATURDAY, JANUARY 18, 1902.

Small-pox in London.

SMALL-POX continues to increase in London, and already the number of cases notified has in a single week amounted to 250. Cases have occurred in each of the 29 districts, but the disease has been specially prevalent in St. Pancras, Holborn, Stepney, and Southwark, spreading in the main amongst persons occupying the poorer tenement houses and affecting the common lodging-house class and their associates. Judging by the experience of previous epidemics, it may be expected that the increase will be manifested for some weeks to come, and if we may draw conclusions from an interesting diagram in the last published annual report of the medical officer of health of the County of London which is based upon the death records of 60 years, there should be some falling off in March, with a further increase in April and May, and then, as the warmer weather sets in, a general decline. The small-pox in London is manifesting its effects in more distant parts of the country, and we hear of cases due to infection conveyed from the metropolis as far as Wales and Exeter. There does not, however, appear to be any evidence of pandemic small-pox. The returns of the Registrar-General show that up to the present time but few deaths from this disease are occurring in Paris, although it is probably to the small-pox in Paris last year that London now owes its infection. Germany seems exempt so far as its principal towns are concerned, as might be expected in a country where revaccination is general. But Austria and Italy appear from the records to be equally exempt—and these countries cannot claim that their immunity may be due to the same cause as Germany; and, again, the northern towns of Europe, with the exception of St. Petersburg, appear to be equally free. There is therefore ground for hoping that the small-pox of London, like the small-pox of Paris, may last for only a year, but it is probable that for the next few years it will continue to cause trouble to sanitary authorities. The fact pointed out in the report to which we have referred that the period which has elapsed between the epidemics of 1838 and 1871 was 33 years and that a like period since 1871 is now drawing to a close, suggests that we may have at the present time the beginnings of more widespread prevalence.

There has been much demand by anti-vaccinationists for the vaccination statistics of the patients recently admitted into the hospitals of the Metropolitan Asylums Board, as if there were some possibility that they would teach a lesson dissimilar to that which had been provided by every previous epidemic in every place. The report which the Metropolitan Asylums Board received from its statistical committee on Saturday last tells the same story as that to which we are accustomed. 760 vaccinated persons had a fatality of 14 per cent., and 190 unvaccinated persons had a fatality of 50 per cent. It would have been well if the figures had included the deaths and recoveries of all those who were admitted during the year 1901 instead of the actual deaths and recoveries during that year, for the latter method has a tendency to include a disproportionate number of deaths owing to the short period during which the disease has prevailed in London. In a few weeks' time it will be possible to tell a more complete story, and we trust the tables, corrected in the sense which we have indicated, will be again published. The report gives interesting information of the incidence of the disease on public officials and other persons brought while in the performance of their duty into contact with cases of small-pox. It is in the highest degree discreditable to the London sanitary authorities that during the year no fewer than 21 persons were admitted into the hospitals who were employed on the work of disinfection, most of whom were the servants of borough councils. Not one of these persons, the report states, had been vaccinated since infancy. With a record such as this we are reminded that claims have been put forward for the borough councils to administer the vaccination law. We are bound to remark that their inability to take care of their own servants will not impress the public with a sense of their fitness for this duty. There is much need for the association of the work of vaccination with the disease-preventing authorities, and the neglect to secure the protection against small-pox of their own officials is distinctly discouraging.

The records of the Metropolitan Asylums Board provide useful material for the purposes of comparison. Between the years 1884 and 1900 inclusive 17,900 cases of small-pox were received into their hospitals and 2198 persons were employed therein. Of these 17 contracted small-pox, of whom 13 were not revaccinated until after they had joined the hospital ships, while four were workmen who escaped medical observation. During the past year not a single case of this disease has occurred among the staff of the hospitals. We sincerely trust that the publication of these figures will have the effect of influencing many to resort to revaccination. It should be understood that it is open practically to everyone to make himself absolutely insusceptible to small-pox, and it needs to be remembered that there is sufficient small-pox in London to render exposure to infection a possibility to all. A concluding paragraph in the report of the Statistical Committee is an extract from a report published in 1872; this report states that out of upwards of 14,800 cases of small-pox received into the hospitals only four well-authenticated cases were treated in which revaccination had been properly performed. The evidence of the value of revaccination afforded by the cases admitted in 1901 is not stated, and we do not doubt that it would have been if there had been any reason to re-state the case. Without the aid of the public, sanitary authorities and medical practitioners can do but little, but with ready coöperation the prevalence of small-pox could be largely reduced.

Theatres and the Safety of the Public.

THE efforts which the London County Council has recently been making to secure the safety of the playgoing public have an interest far wider than the limits of the

metropolis. For not only are the London theatres visited by thousands of persons yearly from every part of the United Kingdom and from abroad, but regulations which are enforced for the safety of playgoers in London are likely to be quickly imitated in our other great towns. This question is one in which THE LANCET must necessarily take a keen interest, since we have always felt that nothing which affects the health or the safety of the public can possibly be indifferent to us. Of course, a vast improvement in respect of safety has taken place in all English theatres, and, indeed, in theatres all over the world, during the last 20 years. Playhouses are more scientifically constructed. Party walls of great thickness between stage and auditorium and the presence of firemen behind the scenes are now insisted on. The importance of isolated sites wherever possible for such buildings is widely recognised. Fire-proof curtains are in general use, while the introduction of electric lighting, more particularly behind the scenes, has unquestionably diminished the danger of fire. What the London County Council has done, and what other local authorities would do well to do also, is to systematise the safeguarding of theatres by drawing up a precise code of rules and formulating their requirements for the information of theatrical architects and managers. It is true that complaints are heard, in London at least, from these gentlemen that the requirements of the Council are capricious, that there is no finality in their demands, and that costly alterations are occasionally insisted on which are not really necessary. But this only means that the last word has not yet been spoken in the art of theatre-building and that it is only by slow degrees that local authorities, whether in London or elsewhere, can arrive at a completely satisfactory definition of what is an ideally safe playhouse.

Meantime it is only right that every care should be taken to discover any additional safeguards that may be useful and it would be unreasonable to complain, as theatrical managers have been known to complain, of a progressive increase in the demands made upon them by the requirements of the local authority. Certainly no sympathy will be felt with such complaints among members of the medical profession, for with them the saving of life must ever be the first consideration. After a time no doubt experts will have arrived at a conclusion as to what points are essential to the safety of a theatre under modern conditions and how the dangers that arise from fire and panic may best be guarded against. It will then be possible for the local authorities in all our great towns to draw up a code of regulations which will secure the maximum of safety for playgoers while making no demands upon managers which reason and experience do not show to be essential. One of the points upon which the London County Council has lately insisted is the danger of overcrowding. And in this it seems to us that its action has been indisputably wise. The practice that prevails in theatres in all parts of the kingdom of allowing the gangways to be blocked with spectators is a most undesirable one, and in London, at least, the Council is determined to check it. Without speaking of the unhealthy conditions which must prevail in a playhouse thus overcrowded—a point on which, among medical men, there can be no two opinions—the additional risk which would be caused in case of an outbreak of fire when the passages are filled with spectators would be very great. There were even certain theatres in London where seats used to be placed in the gangways when all other places were full; this dangerous practice, however, we are happy to say, is now forbidden.

But it is with the most recent regulations of the London County Council, in which it is understood that the Lord Chamberlain entirely concurs, that we are here specially concerned. Two of these deal with points which we have not yet touched upon. One rule provides that "the public may leave the theatre at the end of the performance by all the exit doors." This is of the first importance, and the rule deserves to be adopted by all the theatres in the kingdom, and, indeed, in the world. At the present day all theatres, it is to be hoped, have what are called "extra exits," but these are almost universally kept closed. In many playhouses the audience are not even allowed to use them except in case of emergency. The result of this state of things is obvious. Exits which the public are not accustomed to use escape notice in moments of panic. In some cases through long disuse it has ceased to be possible to open the doors. Instances have even been known where these "safety" exits have been actually barred up in such a way that escape by them from within would be impossible. The excuse urged for this extraordinary state of things is that a larger staff would be required if more than one exit in each part of the house were commonly used. This, however, is certainly not a sufficient reason for permitting so dangerous a practice. The rule that so-called "extra exits" should be always and at all times available to the public, that they should be fastened only in such a way that pressure from within would immediately open them, and that every evening at the close of the performance they should be thrown open for general use, is a wise one. The other new regulation is that the fire-proof curtain is to be lowered at least once during every performance so as to ensure its being in proper working order. This again is a rule which will at once commend itself to the common sense of every thinking person. A mechanical contrivance such as a heavy fireproof curtain, unless it is constantly used, is very liable to get out of order. A cry of fire arises, and when the attempt to lower it is made the mechanism refuses to act, the curtain sticks, and an elaborate and costly safeguard proves valueless from lack of use. Certainly if fireproof curtains are to be fitted in theatres it is only reasonable that they should be lowered nightly. The amount of time taken by the operation would be infinitesimal and the additional security would be immense. Medical men, the aim of whose art is the relief of suffering, must welcome regulations such as these which aim at reducing, and perhaps ultimately abolishing, the terrible waste of life which has too often been associated with fire or panic in theatres.

The Horos Case.

ON Dec. 20th, 1901, FRANK DUTTON JACKSON, aged 35 years, and LAURA EDITHA JACKSON, aged 47 years, man and wife, were convicted at the Central Criminal Court and

sentenced—the former to 15 years' penal servitude and the latter to seven years'. The prisoners, commonly known as THEODORE and LAURA HOROS, were at the head of a *quasi*-religious institution, the "Theocratic Unity and Purity League." The chief tenets of the league were set forth as chastity, celibacy, self-abnegation, and secrecy, and the induction of novices was accompanied by the most grotesque ceremony and mystic observances, such, in fact, as were calculated to lead to mental bewilderment and especially in the case of emotional subjects. A fruit and nut diet was enjoined as a means to a higher spiritual development. That the order was established for the main purpose of robbing individuals who had the misfortune to be engaged within its meshes there can be no shadow of doubt. Had the *modus operandi* of the prisoners ended here the case against them would have resolved itself into a charge of vulgar fraud. Who were the persons sought for membership of the league and what were the means by which they were to be entrapped? The majority of the victims were impressionable young women attracted by matrimonial advertisements which the male prisoner caused to be inserted in a newspaper. FRANK JACKSON represented himself as being the son of the female prisoner and by specious promises of marriage he succeeded in persuading the girls to leave their homes and to join the Purity League. Then by subtle devices under the guise of religious instruction he obtained control of them bodily and mentally and with the concurrence and aid of his wife he encompassed their moral ruin. The details of the procedure adopted by the prisoners are too revolting to narrate.

Before the magistrate the following charges were preferred: (1) of having obtained by fraud the moneys and goods of certain young women whom they had lured into their power; (2) under the Criminal Law Amendment Act, of having procured these women for immoral purposes; (3) of having been guilty of rape upon the person of DAISY ADAMS, aged 16 years; and (4) of an unnatural offence upon another young girl. Committed for trial and indicted upon all these charges, they were proceeded against on the third charge only at the Old Bailey—not that the others were of a venial character. Although DAISY ADAMS—whom they had obtained from her mother, a person in sympathy with their religious tenets, under the promise to adopt her and to teach her certain subjects—had arrived at the age at which consent might be urged in defence, it was contended by the prosecution that she had been coerced and forced by the prisoners and was not therefore a willing agent. The Solicitor-General in his opening speech remarked that "the formation of the Theocratic Unity and Purity League was part of the machinery employed to attract certain emotional members of the public and eventually produce their downfall."

In addition to the statute crime for which he was indicted FRANK JACKSON was proved to have been guilty of practices which, in the words of the late Sir JAMES PAGET, were "a filthiness forbidden by GOD, an unmanliness despised by men." Beyond a direct denial on oath by both prisoners of the offences charged against them the male prisoner pleaded "the chastity of impotence," a plea negatived by the highest medical evidence. That both the man and the woman were endowed with more than ordinary intellectual acuteness and power, and notably so in the case of the woman, only served to aggravate their heinous offences, for they prostituted their intellects in the service of their depravity. Primarily their aim was to obtain money from their dupes, but they must have been steeped in vice and debauchery to practise such means as they did, not only to commit robbery but by having control over their victims, whom they viciously regarded as silenced by the knowledge of their shame, to secure themselves from retribution for their guilt. The female prisoner, because of her age and sex, received a comparatively mild sentence. Probably Mr. Justice BIGHAM, who tried the case, had reason for making such disparity in the punishments, but to our minds EDITHA JACKSON'S claim to indulgence was visionary. Her past history was exceptional in the variety and malignity of her crimes. She was the wife of the male prisoner, and yet she aided and abetted in the committing of the most brutal and lustful assaults on several members of her sex. Possibly his Lordship regarded her mental condition as hovering over the confines of sanity and lunacy. The case will long be remembered as one of the most remarkable ever tried in our criminal courts.

Annotations.

"Ne quid nimis."

THE CONTROL OF SMALL-POX IN AND AROUND THE METROPOLIS.

THE progress of small-pox in London raises the important question as to whether the new metropolitan borough councils and the boards of guardians are one and all using their best endeavours to control the march of the epidemic, and whether there is about their procedure that active coöperation which can alone ensure a measure of success. As regards the borough councils an opportunity is now afforded them of justifying before a somewhat cosmopolitan audience the new dignity and pomp which the legislature has recently conferred upon them. The administrative bodies of this and other countries are observing closely the manner in which London is combating the deadliest foe which now threatens its inhabitants, but against which science has afforded a sure and certain protection. Now that Parliament has reassembled the President of the Local Government Board will doubtless be inundated with questions as to the extent of the outbreak and the precautions which are being taken against its spread. We shall watch with some curiosity the answers which will be given by Mr. Long to these queries. Fortunately, a stronger or more determined Minister has never filled the departmental post in question, and we may rely upon it, generally, that he will deal firmly with any recalcitrant sanitary or vaccination authorities. There are already indications that the anti-vaccinationists are endeavouring to curtail the useful work both of the medical officer of health and of the vaccination officer, and it is a fortunate matter that neither of these officers can be removed without the sanction of the central authority. The educated portion of the community will look to Mr. Long to defend the public health of the metropolis with vigour and he may rest assured of the cordial support of the medical profession in his endeavours. He is, we believe, already making detailed inquiries, both inside London and in the ring of unions which immediately surrounds it, as to what steps are being taken. Dr. R. D.

Sweeting, Dr. W. W. E. Fletcher, and Dr. H. T. Bulstrode, three of the Board's medical staff, are dealing with the metropolitan area properly so-called, while other medical inspectors are paying visits to the sanitary and vaccination authorities in the outer ring. But Members of Parliament with inquiring minds also will be asking what the London County Council is doing to promote harmonious action among the several borough councils over which, in connexion with bubonic plague, it exercised a benevolent and a useful influence. The enemies of the Council—all of us have enemies—will not be slow to infer that the Council, now that there is a little unpopular fighting to be done, is loath to move, and that in the matter of small-pox prevention, which involves considerations as to vaccination, the less said or done the better. But if these be its views it may be found that other efforts will be made to bring together a meeting of the local authorities and to evolve a scheme of joint action which will deprive the Council of much of the credit which in the administration of the sanitary affairs of the metropolis it has, up to now, most deservedly gained. The Council, it must be remembered, possesses no jurisdiction as to vaccination. Under these circumstances the active intervention and assistance of the President of the Local Government Board may be desirable. There are no thinking people who wish to see the fair name of London as regards health jeopardised by the small but rampant body of anti-vaccinationists, nor will the working-classes welcome the decline of trade which will inevitably attend a serious extension of the present outbreak. The metropolitan medical officers of health are largely independent officers, able, and withal anxious, to do their duty. But in their endeavours they must be supported by the head of the public health service of the country, and we trust that Mr. Long will make it clear at an early date in the session that he intends the Vaccination Act to be enforced and all other measures against the spread of the disease to be taken; that efforts shall be made to bring about the notification of chicken-pox, that sanitary authorities shall provide expert advisers to assist in the diagnosis of small-pox, that contacts shall be sought out and watched, that school-children shall be inspected as to their vaccination, that vaccination and revaccination shall be promoted by all available means, and, finally, that the medical officers of health and the vaccination officers shall be *encouraged* and supported in their efforts.

THE LANCET RELIEF FUND.

A PERUSAL of the annual report of the Almoners of this Fund, which will be found on page 186, serves as a reminder, if any were needed, that the falling-off in more recent years of the number of those seeking admission into the medical profession does not of necessity point to an increase in the worldly prospects of those who are already within its portals. We do not say, judging from our experience in the administration of the Fund which it has been our privilege to provide for the past 13 years, that it can be claimed that there is any widespread necessity for relief among the profession. We believe that the exact truth is rather that there are many who are just able to earn a bare living out of the exercise of that profession which cost them (or their parents) so much to enter—that the receipts and (of necessity) the outgoings are so evenly balanced that there is absolutely no margin to provide against even the least adverse circumstance which may arise. Our experience in the administration of the Fund teaches us that this is a true statement of the position in which many of our brethren find themselves day by day, week by week, and year by year, with the ever-present anxiety to make both ends meet and yet to keep up appearances—a position in itself well-nigh intolerable. Add to this the inevitable suffering of the sensitive husband and father who, having failed to make even a small provision by insurance, or by joining such an excellent body, for instance, as the Society for the Relief of Widows and Orphans of Medical Men, sees absolutely no prospect of leaving anything behind him for the future support of those dependent upon him should his professional career be cut short, and the picture we draw is on all fours with many of the cases which come before the Almoners. During the year 1901 no less than 82 applications for assistance were received—a number far in excess of those received in any previous year, which rather points to the fact that members of the profession, in common with their lay brethren, are feeling the increased cost of living brought about by the state of affairs in South Africa. Of these 82 applications 35 were dealt with by gifts of money ranging from £5 to £20, and two cases were relieved by way of loan. In addition, one applicant required the guarantee of his funeral expenses to enable him to enter a convalescent home, which the Almoners granted. The total relief afforded involved the expenditure of £383 10*s.*—the largest amount distributed in any one year since the inauguration of the Fund in 1889. Many letters from those who have benefited have been received, expressing gratitude for prompt relief which has enabled them to mitigate, and oftentimes to overcome, their difficulties. To those who have so ungrudgingly helped us in our labour of love it is again our privilege to make public acknowledgment of our indebtedness—to Sir William Selby Church, Bart., the President of the Royal College of Physicians of London; to Mr. Henry Greenway Howse, the President of the Royal College of Surgeons of England; to Sir William Turner, K.C.B., the President of the General Medical Council; to Sir Henry Pitman, for many years the Registrar of the Royal College of Physicians of London; and also to the late Sir William MacCormac, Bart., K.C.B., K.C.V.O., who during his five years of office as President of the Royal College of Surgeons of England did so much for the Fund. The application form of THE LANCET Relief Fund will be found in our present issue, and can be readily detached for use in case of need. We again take an opportunity of asking those of our readers who may have occasion to assist in furthering any application made for relief from this source to note carefully the conditions on which applicants become entitled to participate in the benefits of the Fund, as it is still found that many requests are put forward which are so far outside the objects of the benefaction that they cannot be entertained, and from such applications nothing but disappointment can result. All applications should be made on the prescribed form, and should be sent to the Secretary of THE LANCET Relief Fund, THE LANCET Offices, 423, Strand, London, W.C.

THE MACCLESFIELD INFIRMARY.

LIKE the war in South Africa, the contention between the governors and the honorary staff of the Macclesfield Infirmary has once or twice been prematurely reported to be ended. At last, however, an agreement seems to be made, for at a meeting of the governors held on Jan. 13th a motion was carried with one dissentient to the effect that in future "when a vacancy occurs it shall be advertised at least twice in the recognised medical journals, the applications for the vacancy submitted to the honorary medical staff with a requisition that they carefully consider the same and, if possible, select at least three suitable candidates from which the governors shall appoint." No great fault can be found with this resolution, except, perhaps, that the word "requisition" instead of "request" is needlessly peremptory, and that the governors must consider house surgeons as inanimate objects, as the pronoun "which," according—among other authorities—to

the Twentieth Century Dictionary," is "now used of things only." A long discussion took place over the motion, some contending that it was taking power out of the hands of the governors. One gentleman went so far as to say that he did not intend to take any further interest in the infirmary "now that it had closed its doors to women doctors." Possibly, when the present irritation has subsided, the interests of the patients may again appeal to him. After the motion was carried the mayor announced that he was authorised by the medical staff to place before the governors the withdrawal of their resignations. It is stated that Miss Clarke intends to practise in Macclesfield, where she will doubtless be treated with courtesy by her colleagues in the profession, and where she must now be well known.

THE METROPOLITAN WATER-SUPPLY.

THE report on the condition of the metropolitan water-supply for the month of November, 1901, has recently been published. It is a matter for regret that the publication of the Water Examiner's report should always be so long deferred, and it is not easy to understand why there should be so much delay in the matter, especially when it is remembered that the report is always printed in the same form and that much of the information given month after month is identical in substance. During the month of November the water of the Thames was in good condition at Hampton, Molesey, and Sunbury. The height of the river varied from a point three inches above to one 10 inches below the average summer level. At West Molesey the rainfall during the month amounted to only 0·45 inch. The average amount of water abstracted from the Thames daily was 118,110,369 gallons, that from the Lee 39,372,315 gallons, and the "springs and wells" owned by the companies produced a daily average amount of 48,239,786 gallons. The total daily amount, including that supplied from Hampstead and Highgate for non-domestic purposes, was 205,887,957 gallons, which represents a daily consumption per head of 32·68 gallons for a population estimated at 6,300,724 gallons. The daily amount supplied per head varied considerably in the cases of the different companies. The greatest amount supplied was that given by the Chelsea Company which was 42·21 gallons per head; the smallest amount given was that supplied by the East London Company, which was at the rate of 27·27 gallons per head. For the accuracy of these figures the companies are responsible, and it does not appear that the Water Examiner has the power, even should he have the wish, to ensure their accuracy. In regard to the approximate amount of water delivered for other than domestic purposes the Chelsea Company estimates that 20 per cent. of its supply, "exclusive of waste," is so used. The East London Waterworks Company estimate, that no less than 30 per cent. of its supplies are used for non-domestic purposes. A large proportion of this water is, we believe, accurately measured. It may be noticed that the East London Company in the return which it gives of the details of its supply does not make an allowance for "waste." Neither the Kent Company nor the Grand Junction Company makes any such allowance. All the other companies mention "waste." It is by no means clear what the reader is meant to infer from this word "waste" used in this connexion. During the month of November the number of supplies given by the companies was increased by 1508, and the total number now amounts to 936,641. A constant water-service is now professedly given by four of the eight companies, the Chelsea, the East London, the Grand Junction, and the West Middlesex. The Lambeth Company professes to give constant service to only 77·4 per cent. of its customers, so that nearly a quarter of them are still suffering from the inconveniences of an intermittent supply. Dr. T. E. Thorpe, the analyst to the Local Government Board, reports that all the samples of the Kent Company's water which were examined showed that it was, as usual, of "high organic purity and excellent quality." The specimens taken of the New River Company's water were clear, but "in the cases of the other companies, in some samples minute amounts of suspended matters were present." Of the samples which were collected on Nov. 11th and 12th full analyses were made. It is of interest to compare the relative amount of organic impurity which was present in these specimens. It was as follows: "Taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount contained in an equal volume of water supplied by each of the metropolitan water companies was: Kent 1·1, New River 1·3, Southwark 2·5, Chelsea 2·6, East London 2·7, West Middlesex 2·8, Grand Junction 2·9, and Lambeth 3·0." It is readily seen from these figures that the water supplied by the Kent Company and by the New River Company was of very much better quality than the water supplied by the other companies, and that the analysis of that supplied by the Lambeth Company gave the least satisfactory results.

THE DISTRIBUTION OF PLAGUE.

DURING the week ending Jan. 5th, 1902, 9 cases and 6 deaths from plague have occurred throughout Egypt; all these cases and deaths have occurred among the native population at Tantah, 5 of the deaths taking place out of hospital. Notwithstanding the many difficulties which have been encountered at Tantah, the Director-General of the Sanitary Department considers that the work is going on there as satisfactorily as possible, thanks to the energetic measures carried out by Graham Bey and the European and native staff under his direction. As regards the Mauritius a telegram from the governor received at the Colonial Office on Jan. 10th states that for the week ending Jan. 9th 37 cases of plague occurred, of which 22 were fatal. As regards the Cape of Good Hope, a telegram from the governor received by the Colonial Office on Jan. 8th states that for the week ending Jan. 4th the cases of plague at the Cape Peninsula numbered 1, a European; at Port Elizabeth and all other places the cases numbered 0. The deaths from plague were as follows:—Cape Peninsula, 0; Port Elizabeth, coloured persons 1, natives, 1; all other places, 0. The area of infection remains unchanged. The cases of plague in persons under naval and military control numbered 1, a private in the 2nd Dragoons, at Greenpoint Camp, Cape Town.

THE MOTOR AND THE MICROBE.

Apropos of an annotation on this subject in our issue of Jan. 4th, p. 44, we learn from an interesting article in *Engineering* of Jan. 10th that alcohol for driving motors is coming into gradual use in several continental countries. In France this is owing to the duty paid on all imports of mineral oil and to the enormous development in the cultivation of the beet, the production exceeding by far that necessary to meet the home consumption of sugar. "There is no exaggeration," says our contemporary, "in stating that the experiments which are being carried out extensively in France for developing the use of spirit in the production of heat, light, and power have more for their object to come to the aid of the agriculture of the country than to mark a step forward in any branch of industry." We said in the annotation referred to that "the idea of microbes as a source of motive power appears at first sight preposterous, but a little reflection will show that indirectly even for this purpose micro-organisms may be very intimately concerned." And, again, after pointing out the rôle of micro-organisms

in fermentation in the production of alcohol we added: "It is therefore not chimerical entirely to suggest that the day may come when we may not only owe our increased facilities of locomotion to the much-abused microbe but some of our effectual means of artificial illumination also." The following statistics and facts show how nearly this idea is being realised. France, according to *Engineering*, now produces a good deal over 55,000,000 gallons of spirit annually, much of which is denatured, rendering it liable to a relatively small duty, so that it is probable that soon its price will not be more than 1*s.* 4*d.* per gallon. An association exists to promote the use of spirit for industrial purposes. At the Agricultural Exhibition in Paris last year 15 spirit motors were at work and they created considerable interest. It is stated that the results obtained with these motors has been satisfactory as a whole and that they tend to prove that success will be complete with motors built specially for consuming spirit. Amongst the advantages of spirit for motive power may be mentioned the fact that spirit motors have more elasticity than have petroleum motors and work more quietly, and, moreover, as we have previously pointed out, they are free from the objectionable smell occasioned by the petroleum motor. The efficiency of the spirit motor is also said to be greater. Fermentation and its microscopic agency may after all prove a formidable rival to the naphtha wells of the world, for the ferment is ubiquitous and its food is abundant everywhere, while the sources of petroleum are far from us and widely scattered.

A UNIFORM METHOD FOR THE ESTIMATION OF ARSENIC.

IN our issue of August 24th, 1901, p. 541, we announced that a joint committee of the Society of Chemical Industry and of the Society of Public Analysts had been appointed with the view of deciding the question of a standard method for the estimation of arsenic and especially of small quantities as in beer. At that time this committee had already reported that it felt in a position to prescribe a method but that before taking that step it was advisable to submit this method to a continued practical trial. This has now been done with the result that the Marsh-Berzelius method, with certain precautions, is recommended. For generating the hydrogen from zinc diluted hydrochloric acid seems preferable, but first it must be ascertained to be arsenic-free; or it can be partially distilled after first oxidising with bromine and then reducing with sulphurous acid, the first portions coming over containing the arsenic as arsenious chloride. Sulphuric acid can be purified similarly by heating it with a little pure sodium chloride. The generating-flask should be of a capacity of 200 cubic centimetres and should be provided with a 50-cubic-centimetre tapped funnel and an exit-tube, the latter being connected with a drying-tube containing, first, a roll of lead paper or cotton-wool saturated with lead solution, then a wad of ordinary cotton-wool, next a layer of granulated anhydrous calcium chloride, and again a wad of cotton-wool. A hard glass tube drawn out to a point 0·092 inch in diameter is connected with this drying tube. A control experiment is first made which will show whether the starting of the actual experiment is justified by the non-appearance of a mirror after 20 minutes. Standard arsenical mirrors are prepared by adding a few cubic centimetres of a solution of arsenious oxide in hydrochloric acid (each cubic centimetre containing 0·001 milligramme of the oxide). The arsenic standard solution or the suspected fluid is added after the hydrogen has been coming off for 20 minutes. The standard mirror tubes are sealed while full of hydrogen and preserved and placed upon a white card for comparison. The test is described to be of such delicacy that, using quantities of 20 grammes of a solid substance or 20 cubic centimetres of a fluid, it will give a distinct indication of one part of arsenious oxide in 7,000,000. There is little doubt that this method will be very generally adopted and a universal method is certainly desirable in order that analytical discrepancies may be avoided. While, however, this report seems to provide a satisfactory method probably for the generality of cases we do not gather whether it would answer in specific cases, as, for example, in the case of organo-compounds of arsenic, notably the cacodyls. Nor would the report appear to throw any light upon the exact combination of arsenic present, say, in beer. We may hope that the Royal Commission on Arsenic which will meet again shortly will have some definite information on this subject brought before it.

ROYAL MEDICAL BENEVOLENT COLLEGE.

WE learn with pleasure that under the will of the late Mr. J. F. France, consulting ophthalmic surgeon to Guy's Hospital, a sum of money has been placed at the disposal of the Council of Epsom College to provide pensions for aged and necessitous members of the medical profession. The election is vested in the Council of the College for the time being, following the regulation which the donor formulated in the case of the 10 female scholarships at the Royal Asylum of St. Anne's Schools which he purchased and presented to the College. Mr. France was a warm supporter of the institution from its initiation and for many years was a most regular attendant at the meetings of the Council. This second benefaction leaving the election of the pensioners in the hands of the Council emphasises the confidence felt by the testator, derived from his personal experience, in the care with which the recipients of these great boons are selected by the governing body. The Council at its last sitting determined to found pensions of £30 a year to be called the "France Pensionerships." The first election to these pensions will take place at the meeting of the Council on April 2nd.

DYSARTHRIA AND OTHER SPEECH-SYMPTOMS PRODUCED BY A SUBCORTICAL GLIOMA.

CASES of small encapsuled tumours affecting the functions of limited areas of the brain by acting upon the subcortical nerve-tracts concerned are not of common occurrence, especially as regards the functions of speech-utterance. Dr. James Stewart of Montreal, in *American Medicine* of Dec. 21st, 1901, records a case of special interest not only as illustrating the diagnosis and successful removal of the tumour but as showing that dysarthria and not aphasia is the characteristic form of speech-disturbance met with in the case of tumours subcortical in relation to Broca's centre. Following the lead of Lichtheim and Déjerine, it has been the custom with many neurologists to call speech-disturbances attending lesions in this situation "subcortical motor aphasia." Dr. Bastian in his recent work on aphasia has clearly shown that these subcortical lesions do not give rise to aphasia but to dysarthria or anarthria. The following case illustrates the above points. The patient was a man, aged 37 years, by occupation a painter. He was healthy and free from syphilis. He first came under Dr. Stewart's observation in December, 1900, with transient attacks of total loss of speech. He had been in perfect health, with the exception of a slight frontal headache, until the preceding August, when he was suddenly seized with an attack solely characterised by total loss of speech-utterance for about 30 minutes. Six weeks later he had a precisely similar attack, and up to the time of his admission (December, 1900) he had in all 10 such seizures, the last one occurring on the morning of admission. "During the attacks he understood perfectly what was said to him and knew what he desired to

utter." During the last few attacks a slight "deadness" and numbness of the right index and middle fingers were momentarily felt. Optic neuritis and headache of a severe character now developed, and later there appeared facial spasm followed by paresis of the lower facial muscles on the right side. There was also a weakness of the right half of the tongue. Articulation now became difficult, at first as regards labials and later as regards all sounds (dysarthria), and finally a condition of complete inability to utter words (anarthria) prevailed. Cerebral tumour was diagnosed, and after trephining and opening the dura mater a subcortical tumour was found in the lower part of the ascending frontal convolution. The tumour measured one inch by three-quarters of an inch; it was encapsuled and presented a firm consistency. Microscopic examination proved it to be a glioma. "On removing the tumour about two ounces of turbid watery fluid escaped from beneath it, leaving a cavity just over the first part of the horizontal branch of the fissure of Sylvius." The power of articulation began to return gradually on the eighth day after operation, and when the patient left the hospital on the twenty-eighth day articulation was nearly normal. He, however, spoke slowly, labials especially requiring deliberate effort. Handwriting, which was at first incoördinate (graphic ataxia), also began to improve and in a short time it became quite normal. Muscular power in the right hand was always retained. Dr. Stewart points out that there is no clinical difference between the speech-disturbance of subcortical lesions and bulbar lesions, and that differential diagnosis is only possible by the help of collateral symptoms. The proximity of the tumour to the cortical hand centre accounted for the incoördination of writing which existed when the tumour had nearly attained its full size.

THE PLASTIC SURGERY OF THE FACE.

THE art of repairing or replacing lost features has a great antiquity. In India especially, where removal of the nose has been long a favourite form of punishment, attempts to shape a new nose were made centuries ago and they met with a large amount of success. In Europe Tagliacozzi of Bologna devised several methods of replacing a lost nose, and his work describing his procedures was published in 1597. Yet for nearly 200 years these methods were disused, and it was not until near the commencement of the nineteenth century that a revival occurred in this important cosmetic art. Even at the present time many surgeons still recommend artificial noses as vastly superior to anything that surgery can effect, but the present results are very remarkable. The various methods of skin-grafting have done much to facilitate these operations, but the surgeon is especially aided by the thinness, elasticity, and vascularity of the skin of the face. Dr. J. B. Roberts delivered the Mütter lectures at the College of Physicians, Philadelphia, and he chose the Plastic Surgery of the Face for his subject, and these lectures, a revised edition of which he has now published, provide probably the best extant description of the various procedures which may be adopted for repairing deformities of the face. There are two main methods by which lost tissue may be replaced. In one a pedunculated flap of skin is raised from a neighbouring part and is twisted on its pedicle until it occupies the new position, where the edges and surfaces of the tissues have been prepared for it. This is the "Indian" method and is in some ways the more satisfactory as the risk of sloughing of the flap is extremely slight. The chief objection against it is that it necessitates a scar at the spot from which the flap is removed. The other method is represented by the Tagliacotian operation. In this the flap is taken, not from the face, but from elsewhere—from the patient's arm or leg—or from some other person. In this method the risk of sloughing is undoubtedly increased except when pedunculated flaps are used, but in the latter case it is necessary to fix the arm so that the flap may be applied. This constrained position is, at first at least, very wearisome. Antisepsis and asepsis have enabled surgeons to undertake very extensive plastic operations, and it is not improbable that this group of procedures is capable of wide extension.

THE KING'S SANATORIUM.

WE desire to draw the special attention of our readers to a notice which appears in our advertisement columns relative to the Prize Essay in connexion with the King's Sanatorium. The advertisement gives the replies of the Advisory Committee to sundry questions which have been addressed to the committee by intending competitors.

SANNA'S POST AND THE BLOEMFONTEIN WATERWORKS.

EARL ROBERTS went to Woolwich on Jan. 13th to present medals to a number of officers and men who had returned from South Africa, and especially to honour the members of the Q Battery of the Royal Horse Artillery for their memorable and gallant fight at Sanna's Post. The Commander-in-Chief was accompanied by Lieutenant-Colonel E. J. Phipps Hornby, R.A., V.C., who commanded the battery on the occasion in question. There is no need to detail all that took place at Sanna's Post and the manner in which Q Battery so greatly distinguishing itself, because these facts are already well known. As the subject is connected, however, with one of the most lamentable incidents in the medical history of the war we need not apologise for referring to it. A somewhat new and strong light has been thrown upon the occurrences which took place at Sanna's Post and which led to the capture of Colonel Broadwood's force and to the ambush into which the Q Battery accidentally fell by an article in the *Standard* of Jan. 14th. According to the account of the special war correspondent of the *Standard* the very hard fighting that occurred at this post was but part and parcel of a carefully prepared scheme to capture and destroy the waterworks. "After our entry into Kroonstad, whence President Steyn fled with wonted celerity, there came into my possession," writes the correspondent, "certain of his papers. Among them were many telegrams, marked 'confidential,' from commandants in several parts of the Orange River Colony. On March 27th Chief Commandant Christian De Wet sent the following telegram to Staats President Steyn at Winburg: 'Will it not be well to destroy the waterworks at Bloemfontein and Modder River, if that has not been done already? There are many troops requiring much water, and this may, perhaps, force them to camp elsewhere.' This advice was repeated with greater urgency on the 28th, and two days later Christian de Wet was on the ridge of hills overlooking the waterworks outside Bloemfontein and the doomed bivouac of Colonel Broadwood." The natural inference to be drawn from these and other confidential telegrams is that De Wet's object was not to ambush the British forces, but to destroy the waterworks near Bloemfontein, a step which he had repeatedly urged upon the council of war. Whether the capture of these waterworks by the Boers should have been foreseen and guarded against at all costs by the British troops it is not for us to say, but no one can doubt that their loss was followed by disastrous consequences as far as the health of Lord Roberts's army was concerned. A deplorable epidemic of enteric fever suddenly occurred after the capture of these waterworks by the Boers, and the hospitals with the British forces were, for the time being, quite unequal to provide for

the number of sick that poured in. That seems to us to have been, in the main, both the cause and the explanation of the temporary breakdown of the hospital service which took place and about which so much has been heard.

SMALL-POX IN LONDON.

THE small-pox returns for the last week show no diminution in the number of cases. On Saturday, Jan. 11th, 48 fresh cases were notified and removed; on Sunday, Jan. 12th, there were 30 fresh cases; on Monday, Jan. 13th, there were 53 fresh cases; on Tuesday, Jan. 14th, there were 37 fresh cases; and on Wednesday, Jan. 15th, there were 24 fresh cases.

THE CHEAP PISTOL.

SINCE we last referred to this subject in December there have occurred a "Brighton tragedy" and an "Eastbourne tragedy," presenting the usual features of murder and suicide by shooting with a pistol, and the New Year had not been two days old before the "Hunstanton tragedy" showed again the danger of allowing deadly weapons to be bought and carried without restriction. If any member of Parliament should care to ask for a return showing the number of deaths attributable to the revolver in Great Britain during 1901 he would, we believe, find that they were fully equal to those resulting from many of the minor actions that have been fought in South Africa. Parliament in this session no doubt will have plenty to occupy it to the exclusion of such matters as legislation for the restriction of the sale of fire-arms. At the same time the subject may at any moment, when it is too late to legislate, become one of considerable importance. The coronation of His Majesty is approaching, and by that date London is likely to contain a large number of foreign monarchs and their representatives, while our own Royal Family will be constantly before the public. We have no intention of being pessimistic or alarmist, but to shut the door after the horse is stolen is proverbially a useless exercise of caution, and the murder of the late President of the United States should serve to remind us that any miscreant with a disordered brain and 3*s.* 6*d.* in his pocket may at any time take a valuable life if he is reckless or mad enough to sacrifice his own.

SEWAGE DISPOSAL AT CHICHESTER.

THE cathedral city of Chichester has been most unfortunate in the matter of its disposal of sewage. It was only six years ago that a complete scheme of main drainage was carried out at a cost of upwards of £42,000. Now the citizens are face to face with an expenditure of a sum which will probably not fall short of five figures for the improvement of the outfall works. This new expense has been forced upon the corporation owing to a law-suit successfully brought against the city by Lord Gifford for allowing the discharge of foul effluent from the works into the harbour. The sanction of the Local Government Board is now being sought by the corporation to borrow the necessary sum for carrying out an improved scheme at the outfall works. The corporation have adopted the Native Guano Company's system, by which it is proposed to enlarge the tanks to three times their present size, and in lieu of treating the sewage with eight grains of chemicals per gallon, as in the past, to substitute 50 grains. 60 gallons per head of the population per day are to be so treated, and all that there may be in excess of this is to be received in rough filters or placed upon the land. The company's scheme provides that it shall take the whole matter of the outfall works and the disposal of the sewage entirely out of the hands of the council. This requires the fullest investigation before the corporation's seal is affixed to the contract. Sewage-disposal is a very important matter; so, also, must be to Chichester the proposal of the company to convert the sludge into manure. The question of Chichester's outfall sewage works is no new one to the Local Government Board. In the summer of 1899 cases of typhoid fever were traced directly to the consumption of sewage-contaminated cockles from the harbour, and on that occasion the assistance of the Whitehall authorities was sought.

DYSENTERY IN ASYLUMS.

THE discussion upon dysentery in asylums which was opened by Dr. F. W. Mott, F.R.S., at the meeting of the Epidemiological Society on Dec. 13th, 1901, will be resumed to-night (Friday, Jan. 17th) at 11, Chandos-street, Cavendish-square, W., at 8.30. Many physicians associated with the work of asylums are expected to take part in the debate, and Dr. J. W. Washbourn, C.M.G., will open a discussion on "The Relation of the Dysentery of Asylums to that of South Africa," his paper being illustrated by lantern slides and specimens.

THE EARLY HISTORY OF THE ALCOHOL QUESTION IN RUSSIA.

AT any time a trustworthy account of the "liquor traffic" in Russia would have been of interest, and at the present moment so much attention is being bestowed on the alcohol question as it affects this country that a Russian report recently issued by State Councillor J. N. de Lodijensky is worthy of note. From this report, which is the joint work of M. A. G. Pedashenko and M. A. P. Vihliaief, it appears that the Russian people have been accustomed to the use of alcoholic beverages from the earliest times. Ancient manuscripts and legends bear witness to the fact that even in prehistoric times the people were given to feasting and that "med" and beer were enjoyed by the poor whilst wine derived from grapes was drunk by the rich. The "med," like our English mead, was made from honey and is described as having been "slightly intoxicating"; of the composition of the beer we are not told. The art of distillation was introduced into Russia from Western Europe at the end of the fourteenth or at the beginning of the fifteenth century, and from that time the consumption of spirits rapidly increased. The reigning princes granted power to some of the people to sell alcoholic drinks and they also established places for its sale under their own management. At a later period under John III. the Crown assumed the sole right to make alcoholic beverages. This led to illicit brewing and distilling. John IV., who is best known in England as Ivan the Terrible, established a number of public-houses about the year 1555. These houses were afterwards let on lease. Under this system the sole right to keep public-houses and to sell alcoholic drinks in any given district was vested in a single individual. The right to the monopoly was sold for a term of years to the highest bidder and the fee was paid to the Crown. In some places the monopoly was retained by the Crown and the trade was carried on by persons nominated by the Government and bound on oath to trade honestly. Of the spirits used some were prepared in the public-houses; some were manufactured by merchants or landed proprietors. In the districts in which the monopoly was sold the spirits were made by the holders of the licence. In those parts of the country which were retained by the Crown the arrangements for carrying out the work were rather peculiar. Civil officers called "inn-heads" were appointed to conduct the business, and they received no payment for their work, but on the contrary they had to make good a deficit should the returns fall short of the sum fixed by the Government as the minimum. On the other

hand, in the case of a surplus the money was the property of the Crown. But in such cases the collectors of the returns either received presents or "were rewarded by the Czar's gracious thanks." It was thus obviously in the interest of those who conducted the business that the trade should be a good one, and it is therefore not a matter for surprise that the number of inns increased and that drunkenness became more prevalent. At length the Czar Alexis Mikhailovitch, after consultation with the heads of the Church, the nobles, and his councillors, established stringent rules for the conduct of the business. The lease system was abolished in the year 1681, and only one place for the sale of liquor was permitted in each town. This state of things, which would probably be considered a good one by some modern temperance reformers, did not long continue to be in force, and many changes have since taken place in Russia in regard to re ulations for the sale of alcoholic drinks.

ST. THOMAS'S HOSPITAL.

THE great services rendered by the London hospitals, not only to the poor of the metropolis, but to patients from all parts of the country, have long been recognised by those who are conversant with the work of the metropolitan charities. An appeal which has just been made on behalf of St. Thomas's Hospital by the treasurer, Mr. J. G. Wainwright, reminds us of this and calls attention to the great increase in the demands made on that hospital in recent years, involving a heavy addition to the expenditure without there being any corresponding augmentation of the permanent sources of income. Last year relief was given in 150,000 cases. The income of the charity from its landed estate in 1880 was £39,373, and the expenditure for that year amounted to £40,979. For the year ending December, 1900, these estates yielded £42,810, but the necessary expenditure had risen to £52,011, leaving the sum of nearly £10,000 to be provided by benefactions and subscriptions. The surgical cases calling for operative treatment have risen from 589 in 1880 to 2127 in 1900. We know very well that a vast amount of poverty and suffering exists in the immediate vicinity of the hospital, and we sincerely trust that Mr. Wainwright's appeal may meet with a favourable reception.

CIRCULARS ON TROPICAL DISEASE.

SINCE the United States have occupied Cuba, Porto Rico, and especially the Philippine Islands, the necessity of a competent knowledge among its army surgeons of tropical diseases has been constantly in evidence. The *Medical Record* has urged upon the Government the need of the establishment of a school of tropical medicine, but up to the present its pleas have been of no effect. However, some time ago, Colonel Charles Greenleaf, then Chief Surgeon of the United States army in the Philippines, concluded that it would be in the interests of the American medical profession if the results of the investigations made by the Army Pathological Laboratory workers in the Philippines were published. Accordingly, a series of medical circulars treating of diseases encountered in those islands have been from time to time issued. The circulars in question are sent out under the direction of First Lieutenant Richard P. Strong, U.S.A., in charge of the Army Pathological Laboratory in Manila. Several numbers have already been published, but perhaps the most interesting is one on bubonic plague. This circular gives a remarkably full and lucid account of that malady, and while nothing novel with regard to its origin, spread, diagnosis, or prognosis is given some of the final remarks as to treatment are worthy of note. These are: "Yersin serum has been found useless here. Recently, however, a small quantity was obtained from Tokyo with the use of which two out of three patients have recovered. Protective inoculations are not practical for the following reasons. Enormous plant necessary to produce the material, working force needed to inoculate the inhabitants, opposition of the people to the inoculation, and temporary benefit derived therefrom. While statistics are favourable to protective inoculation study of the epidemiological features of the disease throws considerable doubt on its value."

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

As will be seen by the report printed in another column a general meeting of the governors of this hospital was held on Jan. 9th for the purpose of electing a new board of management on which will fall the duty of carrying into force the new rules which were recently adopted. 10 seats had to be filled and for them 10 gentlemen were nominated by an influential section of the governors who are desirous of seeing the interests of the hospital placed in good hands. Needless to say this list did not include any member of the late board, two of whom, however, offered themselves for re-election. The latter were nominated by one of their few remaining adherents and it was characteristic of the methods employed all through the controversy by this party that they were not content with a defeat of their candidature at the meeting but sacrificed the time and the money of this charity by demanding a ballot. It is to be hoped that this will not overthrow the verdict of those governors who were sufficiently interested in the matter to present themselves at the general meeting; at the same time, there is comfort in the reflection that even if two of the discredited old board are re-elected they will be powerless to oppose the determination of the new members to carry out the many reforms which are so urgently needed and which have been so bitterly opposed. A bright feature of the meeting, and one which bodes well for the future, was the election to the post of President of the Earl of Dudley who may be relied upon to play a most important part in rescuing this deserving hospital from the brink of ruin.

SENSATIONAL SIMPLIFICATION.

WHEN a scientific fact, familiar enough to men whose affair is science, falls upon the ear of an average newspaper reporter the printed results are often remarkable and startling. Not long ago a daily contemporary described a method of "infusing life," which was nothing more or less than the process of transfusion into a vein familiar to all medical men. Yet to readers of the newspaper it would seem that an epoch-making discovery had been recently triumphantly achieved. It is unfortunate that very often the name of a genuine scientific worker is incorporated in this manner with the most exaggerated accounts of what he would describe as simply unfinished scientific observation in the pursuit of which he is engaged, the results of which are not yet obvious, and the publication of which, therefore, is entirely premature. We make little doubt that Professor Loeb of Chicago, whose experiments with the eggs and larvæ of the sea urchin are well known, would thus regard the sensational reports upon his work recently appearing in daily newspapers. According to the ingenious writer, Professor Loeb's experiments upon the eggs of an organism which is often hermaphrodite if not parthenogenetic—experiments which are described by the reporter as achieving the development of an unfertilised egg—entail not only an explanation of cancer, but also herald the greatest discovery of the Christian era and bring us within reach, if not of the creation, at any rate of the indefinite prolongation, of existence. In another newspaper we are told that "Professor Loeb's announcement is expressed in 14 statements couched in scientific language unintelligible to the laity." The reporter

has therefore kindly reduced these to "less difficult phraseology" from which we learn that "the nerves contain or consist of colloidal solution which resembles jelly before it jells. Nerve action is simply the passage to and from conditions of gelatification and solution through electrical discharges. ..... Negative ions, termed anions, may have several negative charges. Heat promotes gelatification while cold makes solution less stable, &c." In fact, we believe that we might have understood something of the matter, which seems very similar to Du Bois Reymond's electrical theory, had it not been for that well-meant but unfortunate determination to give it to us in "less difficult phraseology." But "jells" is a sort of word which is suggestive of the late Lewis Carroll's Humpty-Dumpty.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

IN aid of the above institution a performance took place at the St. George's Hall, Langham-place, W., on Jan. 13th. A new and original four act play, entitled *The Scarred Hand*, was performed by a company of amateurs. The play is written by Messrs. Val de Garno and Leopold Montague, and the former name veils the identity of a medical man. No doubt, in consequence of this fact, the medical details which play a prominent part in at least one act of the play were free from the impossibilities and incongruities which are usually wont to accompany such matters behind the foot-lights. In the accident ward of "St. Paul's Hospital," for instance, when a "bad accident case" seems likely to die the nurse in charge did not, as we have seen before now on the London stage, fall upon her knees and pray for Divine aid, but with more practical, if less spiritual, instincts she promptly rang for the house surgeon. This gentleman had not failed to impress upon her with regard to the case in question that "if he bleeds, he dies," and it was in consequence of this warning and the appearance of hæmorrhage, leniently screened, we may add, from a shuddering audience, that she took prompt steps towards the electric bell. The interest of the play is well developed from first to last and its incidents are not of the sensational or morbid character which the title had rather led us to anticipate. A hospital ward and dramatic conversations between a pallid "accident," who is also an ingenious burglar, and a buxom nurse cannot fail to give rather a curious and almost laughable effect when presented on the stage to an audience largely familiar with the quiet realities of hospital life. Nevertheless, the play interested, amused, and never bored. Even professed playwrights do not always achieve equally pleasing results. In the end virtue triumphs, villainy is exposed and handcuffed, and the unfortunate heroine is found, after all, not to have committed bigamy. With these pleasant factors and the matrimonial success of the senior surgeon of St. Paul's even the most exacting spectator must assuredly depart well pleased. That this was the case with the audience at St. George's Hall was evident from the hearty applause and from the calls for "author," to which the joint authors (one of whom also took a part in the play) responded. The hall was well filled and no doubt the Hospital for Epilepsy and Paralysis will gain a well-earned increment.

THE CLASSIFICATION OF NERVOUS DISEASES.

CLASSIFICATION of diseases is not only of importance to the student who is enabled thereby to perceive the natural relations and affinities prevailing, but is of practical use in helping towards a clearer insight into etiology and prognosis. In the *Revue Neurologique* of Dec. 15th, 1901, Dr. N. Chataloff of Moscow propounds a classification of nervous diseases which he regards as an improvement over the etiological classification which was published by Möbius in 1898. The main division is into diseases of nutrition in a limited sense, and anomalies of structure, hereditary or acquired. Diseases of nutrition, moreover, are subdivided into quantitative and qualitative. The whole scheme may be briefly expressed as follows. 1. Anomalies of structure of a hereditary character: these include spastic paraplegia, spinal spastic paralysis, cerebellar ataxia and Friedreich's disease, syringomyelia, Raynaud's disease, progressive muscular atrophy, amyotrophic lateral sclerosis, progressive bulbar paralysis, Huntington's chorea, paralysis agitans, Thomsen's disease, tic doloureux, nodding spasm, and some cases of epilepsy. 2. Anomalies of structure which are acquired: these include cerebral, bulbar, and spinal traumatism; neoplasms of the central nervous system; hæmorrhages, thromboses, or embolisms; intermittent claudication; traumatic neuroses and psychoses; and some forms of vertigo and neuralgia. 3. Maladies of nutrition: these are characterised by disturbances of nutrition in a limited sense and either quantitative or secondary to some form of toxæmia. The quantitative group includes neurasthenia, vertigo, cephalalgia, neuralgia, and exhaustion from overwork. The neuroses of this group have long been known as "functional," but according to Dr. Chataloff they may be regarded as due to lowered conditions of nutrition (quantitative) in the nerve-centres concerned. 4. The qualitative disturbances of nutrition, arising as a rule from some form of toxæmia, include the following: encephalitis in its various forms, hemiplegia, abscess, focal myelitis in its various forms, disseminated sclerosis, hydrocephalus, meningitis in its various forms, polyneuritis, facial hemiatrophy, the post-febrile paralyses (including Landry's paralysis), the neuropathies from alcoholic, saturnine, and arsenical poisoning, tabes dorsalis, Raynaud's disease, pellagra, hydrophobia, tetanus, eclampsia, epilepsy, myxœdema, and acromegaly, the neuroses of diabetes and of Addison's disease, and some forms of hysteria, neurasthenia, chorea, and catalepsy. The classification of nervous diseases is a matter of considerable difficulty, because the etiology of many of them is but little known, while the pathological changes during the prodromal and early stages are still less known. The classification of Dr. Chataloff into four groups may serve as the starting-point for further subdivision into smaller groups showing closer affinities than the scheme is capable of showing at present.

DELEGATE MEETING OF THE INTERNATIONAL ASSOCIATION OF THE MEDICAL PRESS.

SOME time ago we announced that the International Congress of the Medical Press, which was to have met in Brussels last year, had been postponed.[1] It will be remembered that the staffs of the medical periodical publications of the various countries were invited to constitute national associations of the medical press. These national associations were to elect and to instruct two or three delegates who were to proceed to Brussels two or three days before the meeting of the next international congress. They were then to prepare the proposals that would be submitted to the congress. We have now received information concerning an important modification of this plan. The provisional international bureau, or committee, which has its headquarters in Paris, has come to the conclusion that it is preferable not to wait for the convocation of the international congress, but to bring the delegates together at an earlier date. As the success of the congress—indeed, the holding of the congress—depends in a great measure on the delegates being able to formulate practical proposals, these

[1] See THE LANCET, Nov. 2nd, 1901, p. 1210.

delegates cannot set to work too soon. An opportunity for such a meeting has occurred, and the provisional bureau advises that it should be utilised. The Prince of Monaco, who has distinguished himself in the field of scientific research, takes the greatest interest in the scientific press and has offered every facility and extensive hospitality to those who are striving to establish an International Association of the Medical Press. This invitation has been accepted and the delegates of the various national associations of the medical press are now called upon to meet at Monte Carlo on April 3rd next. It is important that the British medical press should take immediate action to be worthily represented. The two main points to be discussed are the protection of literary property and the statutes of the International Association of the Medical Press. If something like an agreement can be arrived at on these points, then it will be possible to convoke a large international congress to confirm or to amend the proposals made and to take action for the purpose of bringing about the practical application of the principles which will then have been widely endorsed. The first step, therefore, is to elect at the earliest possible date the British representatives. When this has been done these delegates will receive from the provisional bureau the agenda of the forthcoming meeting and other details. They will then be able to submit these documents to their respective associations and to receive instructions as to the course which they must follow on April 3rd when they meet the representatives of the other nationalities.

THE EFFECTUAL PRESERVATION OF EGGS.

ON no subject, perhaps, is there a greater conflict of opinion than on the preservation of eggs. Some urge that the newly-laid egg should be kept dry and others that it should be kept moist or even immersed in a fluid. Of course, by effectually sealing the pores of a shell as with wax or grease the moment the egg is laid no difference in weight by the loss of moisture can occur, and it is unlikely that anything can enter the egg from the outside. There is little doubt that the change from a fresh to a stale condition is partly a question of the loss of moisture and partly a disturbance of equilibrium by external agencies. The simple method described by Sir W. T. Gairdner in our columns about a year ago would appear to establish this view. The method consists merely in greasing the eggs the moment they are laid and before they have cooled. This procedure is so successful that eggs so treated are said to be as fresh to the taste when weeks and even months old as they are when eaten an hour after being laid. It is also suggested to immerse eggs in a strong solution of silicate of soda or water-glass. In this case the preservative effect is probably due to the formation of a hard glassy silicate of lime within the substance of the shell, forming, so to speak, a perfectly airtight envelope of glass. The egg is in a way hermetically sealed. This, however, is no argument in favour of wet storage, and even by the silicating process we imagine that the absolutely newly-laid warm egg must be selected for the purpose. It is well known, further, that water-glass possesses a powerful antiseptic action. Eggs treated in this way are said to preserve their fresh milky taste for six months and to be indistinguishable from the egg taken straight from the nest. Eggs, of course, merely submerged in water would probably get stale more quickly than when kept under dry conditions. The question of the effectual preservation of eggs is of the utmost importance and one which British producers have persistently ignored, an inexplicable attitude by which much valuable food is wasted and a source of profit thrown away.

Pharmacological Notes.

IPECACUANHA IN PNEUMONIA.

WITH the object of depleting the lung, and as a consequence so modifying its tissues that microbic infection is counteracted, Perreau has introduced the following method of treating pneumonia.[1] One gramme of powdered ipecacuanha root is mixed with 100 grammes of mucilage and a measured tablespoonful of the mixture is given every hour for about eight hours. A certain amount of practice is necessary in order to avoid either vomiting or diarrhœa by carefully lengthening the intervals between the doses. The method is said to give satisfactory results, especially if employed early in the course of the disease.

THE NITRO-PROPIOL TEST FOR SUGAR IN URINE.

Dr. Carstairs Douglas,[2] in an address before the Glasgow Medico-Chirurgical Society, recently discussed the value of the nitro-propiol test for sugar in urine, basing his conclusions on 200 observations. The test was fully described in THE LANCET of Feb. 17th, 1900, and a note also appeared upon its clinical application in THE LANCET of April 6th, 1901, p. 1028. Dr. Douglas concludes from his experiments that reducing agents other than sugar, which are from time to time found in urine, affect nitro-propiol in the same way as they affect the copper tests. As glucose is the most active reducing agent met with in urine its presence is frequently assumed when the reagent employed undergoes a prompt reduction. This assumption is not warranted unless the reduction is very marked and abundant. When absolute certainty is required in the case of quantities of sugar too small to act with the yeast test, the phenyl-hydrazine test is by far the most trustworthy for clinical purposes. However, when a copious and speedy formation of indigo-blue takes place on boiling diluted urine with nitro-propiol it is almost always the case that the reduction is due to sugar. The chief advantages of the nitro-propiol test are: (1) the striking and distinctive character of the reaction when positive; (2) the delicacy of the test exceeds that of Fehling's solution or the yeast test, though not phenyl-hydrazine; and (3) but little urine is required.

VACCINATION AND THE METROPOLITAN ASYLUMS BOARD.

THE following report was presented at the meeting of the Board held on Saturday, Jan. 11th:—

REPORT OF THE STATISTICAL COMMITTEE.

10th January, 1902.

Statistics concerning completed cases of small-pox treated in the Board's hospitals during the year 1901.—Instead of waiting until the issue some months hence of our usual annual report on the statistics obtainable from the whole of the Board's various institutions we take the earliest opportunity of submitting this special report upon the statistics concerning small-pox in the metropolis during the year 1901. In doing this we believe we are meeting the wishes of the managers and the public. It must be understood that this document is in the nature of an interim report, and is not in substitution for the later and fuller one.

Small-pox in London, 1901.—Small-pox may be said to have been practically absent from London in the first five months of the year. It is true that towards the end of January five cases were admitted into the Board's hospitals, and one in the middle of February; but during March, April, and up to May 29th not a single case occurred. On the last-mentioned date a patient was admitted from Islington, on June 10th one from Whitechapel, on the 29th one from Hackney, and on the 28th and 29th one on each day from Wandsworth. During the month of July and up to August 21st single cases occurred in various parts of London. From August 22nd and onwards, however, the disease appears to have obtained a hold in the parishes of St. Marylebone and St. Pancras. Subsequently cases occurred in every one of the 31 Poor-law parishes and unions comprising the Metropolitan Asylum District.

Vaccination.—We have found it impossible so soon after the close of the year to prepare the usual elaborate tables of vaccination statistics. We have therefore prepared the table annexed hereto (Appendix), dealing only with cases completed—that is, died or recovered—during the year.

The cases have been divided into three classes—namely, (1) "Vaccinated"—i.e., cases having visible cicatrices; (2) "Doubtful," which includes (*a*) cases stated to have been vaccinated, but bearing no visible evidence thereof; and (*b*) cases in which no statement was

[1] Chemist and Druggist, vol. ii., 1901, p. 1048.
[2] Glasgow Medical Journal, January, 1902, p. 17.

made but in which the eruption prevented any reliable observation as to cicatrices; and (3) "Unvaccinated"—i.e., cases admittedly unvaccinated, or bearing no marks of the operation, and as to which no statement was made.

The gross mortality is given as 24·28 per cent. It must, however, be borne in mind that in arriving at this figure many cases of recent admissions have been included because they have been completed by death; whereas the contemporary cases which will nearly all ultimately recover cannot be included until completed by discharge. The result being that the rate of mortality above given is undoubtedly higher than it will be when all the cases have been completed and the final rate ascertained.

The total mortality-rate per cent. of vaccinated cases was 14·21; of doubtful cases, 65·08; and of unvaccinated cases, 50·52.

It is useful to consider the statistics as grouped under age periods. Under 10 there were only 12 vaccinated cases and no death; six doubtful cases, all of whom died; and 95 unvaccinated cases, of whom 52 died—a percentage of 54·74.

Under 20 there were 161 vaccinated cases, of whom three died—a percentage of 1·87; 12 doubtful cases, of whom seven died—a percentage of 58·33; and 161 unvaccinated cases, of whom 79 died—a percentage of 49·07.

There appears to be a distinct diminution in the protective power afforded by primary vaccination after the age of 20 years. The death-rate rising from 9·85 in vaccinated cases between 20 and 25 years of age to 28·95 in cases between 35 and 40.

Incidence of disease on public officials and other persons brought, while in the performance of their duties, into contact with small-pox cases.—Amongst the patients admitted during the year there were no fewer than 21 who were employed on disinfecting work (of whom one died), most of them being servants of borough councils. Not one of these persons had been revaccinated since infancy. There were also admitted two sanitary inspectors, two dustmen, one undertaker (who died), and one medical officer of an infirmary; and three other persons, one of whom assisted in removing a small-pox case from an infirmary, one scrubbed the ward from which a small-pox patient had been removed, and one made beds in the lodging-house in which cases had occurred. All these persons ought to have been protected by re-vaccination.

Against this we draw attention to the experience of the managers at their small-pox hospitals and in the ambulance service for many years past, in both of which services revaccination is always performed on engagement.

Of 2198 persons employed at the small-pox hospitals between 1894 and 1900 inclusive, in which period 17,900 small-pox cases were received into the hospitals, only 17 persons contracted small-pox, of whom 13 were not revaccinated until after they had joined the ship and four were workmen who escaped medical observation.

During the past year a very large number of new staff have joined the ships and the Gore Farm Hospital (the exact number cannot be given at present), but not one case of small-pox has occurred. Not one of the staff of the hospital ships has ever died of small-pox and not one has even suffered from the disease for the past eight years.

From the year 1851 to the end of 1901 there have been employed in the ambulance service of the Board 1282 persons. Four of these persons contracted small-pox, of whom one escaped vaccination when appointed; he died; one was unsuccessfully revaccinated on joining the service, and the operation was not repeated; she died; the two others had been revaccinated and recovered.

The facts which we have briefly set forth in this report in our opinion confirm the conclusions arrived at by the special committee appointed by the managers to collate statistics after the small-pox epidemic of 1870-1-2. That committee in their report, dated July 11th, 1872, said:—

"The necessity of revaccination, when the protective power of the primary vaccination has to a great extent passed away, cannot be too strongly urged. No greater argument to prove the efficacy of this precaution can be adduced than the fact that out of upwards of 14,800 cases received into the hospitals only four well-authenticated cases were treated in which revaccination had been properly performed, and these were light attacks. Further conclusive evidence is afforded by the fact that all the nurses and servants of the hospitals, to the number at one time of upwards of 300, who are hourly brought into the most intimate contact with the disease, who constantly breathe its atmosphere, and than whom none can be more exposed to its contagion, have, with but few exceptions, enjoyed complete immunity from its attacks. These exceptions were cases of nurses or servants whose revaccination in the pressure of the epidemic was overlooked and who speedily took the disease; and one case was that of a nurse who, having had small-pox previously, was not revaccinated and took the disease a second time."

(Signed) V. B. KENNETT-BARRINGTON, Chairman.

APPENDIX.

TABLE GIVING PARTICULARS OF 1017 CASES OF SMALL-POX TREATED IN THE MANAGERS' HOSPITALS TO RECOVERY OR DEATH DURING THE YEAR 1901, THEIR CONDITION IN RELATION TO VACCINATION, AND THE MORTALITY PER CENT.

Ages.	Vaccinated.			Doubtful.			Unvaccinated.			Total cases and deaths.			Ages.
	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.	
Under 1	—	—	—	—	—	—	17	15	88·23	17	15	88·23	Under 1
1 to 5	1	—	—	2	2	100·00	44	24	54·54	47	26	55·32	1 to 5
5–10	11	—	—	4	4	100·00	34	13	38·20	49	17	34·69	5–10
10–15	42	1	2·38	3	1	33·33	41	14	34·14	86	16	18·60	10–15
15–20	107	2	1·87	3	—	—	25	13	52·00	135	15	11·11	15–20
Total under 20	161	3	1·87	12	7	58·33	161	79	49·07	334	89	26·64	—
20–25	132	13	9·85	8	3	37·50	9	4	44·44	149	20	13·42	20–25
25–30	141	15	10·64	5	4	80·00	10	5	50·00	156	24	15·38	25–30
30–35	96	17	17·71	8	4	50·00	3	3	100·00	107	24	22·43	30–35
35–40	76	22	28·95	5	3	60·00	3	2	66·67	84	27	32·14	35–40
40–50	102	27	26·47	14	12	85·71	6	5	83·33	122	44	36·06	40–50
50–60	42	8	19·06	5	3	60·00	1	—	—	48	11	22·92	50–60
60–70	10	3	30·00	3	2	66·67	1	—	—	14	5	35·71	60–70
70–80	—	—	—	3	3	100·00	—	—	—	3	3	100·00	70–80
Total between 20 and 80 ...	599	105	17·52	51	34	66·66	33	19	57·57	683	158	23·13	—
Grand total ...	760	108	14·21	63	41	65·08	194	98	50·52	1017	247	24·28	—

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

A SPECIAL general meeting of governors and members of the National Hospital for the Paralysed and Epileptic (Albany Memorial) was held at the hospital, Queen-square, Bloomsbury, on Jan. 9th. The Earl of Dudley was elected President after he had been voted into the chair for that meeting.

Mr. H. L. BISCHOFFSHEIM proposed the following list of names to be elected members of the board of management: Mr. Ernest De La Rue, Mr. Melvill Green, Mr. Frederick Orridge Macmillan, Sir Alexander Mackenzie, Sir John Rahere Paget, Mr. John Danvers Power, Mr. Arnold Royle, Mr. Edgar Speyer, Rev. Prebendary Henry Wace, D.D., and Mr. James Wigan.

Dr. GRIFFITHS seconded.

Mr. H. H. NELSON said they were there that day to do what was best in the interests of the charity they had instituted, and he thought that the step proposed of turning away the old board of management and having nothing more to do with them was a very great mistake. Was it wise in the interests of the institution to eliminate from the management the whole of the members of the lay board? He proposed, therefore, that to that board should be added two members of the late board, Mr. John Pearman and Mr. F. C. Capel.

Mr. C. A. CAMPBELL seconded.

Mr. F. NETTLEFOLD spoke in favour of Mr. Nelson's views. He considered that the hospital might lose the support of a large section of subscribers who might not like this apparently off-hand way of dealing with the old governors. After all, though they had made mistakes they had been the first to acknowledge the mistakes they had made. Some consideration was due to the old board, and especially when it was borne in mind the influence which their names exerted over a large number of the subscribers.

The question was raised whether the meeting was held under the

new rules and whether *ex-officio* governors could vote. The solicitor to the hospital, Mr. G. H. Bower, said that in his opinion *ex-officio* governors were not entitled to vote because the meeting was under the old rules. This would exclude the medical staff from voting.

Lord DUDLEY said that he would put the question to the sense of the meeting. It did not seem to him primarily a matter of the direct interpretation of any definite rule, it was rather a matter of realisation of the general position and a common-sense interpretation of the spirit of the rules. It was absurd to hold a meeting under a new constitution and to govern its proceedings by rules which related to a previous constitution. The regrettable differences between the old board of management and the members of the medical staff had ended in a decision given by the governors that the medical staff must be represented in the management of the hospital, and the medical staff were therefore made *ex-officio* governors for that purpose. It was absolutely nonsensical to give them a vote with one hand and with the other to take away the new franchise for two years. He personally considered that it was a matter of common-sense, and whether or not they chose to haggle and argue over the interpretation of any particular words in a transitional rule the only reasonable thing to do was to adopt what had been laid down in the report of Sir Edward Fry's committee, and as far as possible decline to raise the old issue. They should all strive to let the commencement of that year be the commencement of a new and happier era in the history of that hospital.

Mr. J. D. POWER said that the clear intention of the rules was that the staff should be *ex-officio* governors and should be allowed to vote immediately. There could not be a shadow of an atom of doubt on the subject, otherwise the rules which were worded in plain English did not mean what they said.

Mr. JOHN PEARMAN proceeded to remark that if certain governors were entitled to vote they had not received notices of the meeting. He was met with loud cries of "Why not?" It would, he explained, take weeks to discover who they were. This remark was greeted with interruptions, but he was allowed to go on with his speech by saying to the meeting, "Pray do not cry out against me if I am making a mis-statement. I am only making a statement which I am informed is correct."

Mr. WALFORD said he did not consider there was any governor there who was so foolish as to be really anxious to quibble over the rules. There was no practical question before the meeting and he asked the Chairman to put the matter to the vote.

Lord DUDLEY then put it to the meeting whether *ex-officio* governors should vote, and this was agreed to by 20 against 6.

The meeting then proceeded to vote for the names submitted for the new board of management and the figures were as follows: Mr. Ernest de la Rue, 33; Mr. Melvill Green, 32; Mr. Frederick Orridge Macmillan, 32; Sir Alexander Mackenzie, 31; Sir John Rahere Paget, 28; Mr. John Danvers Power, 31; Mr. Arnold Royle, 28; Mr. Edgar Speyer, 28; Rev. Prebendary Henry Wace, 34; Mr. James Wigan, 30; Mr. F. C. Capel, 17; Mr. J. Fearman, 16.

Lord DUDLEY declared all but the last two duly elected, whereupon Mr. NELSON demanded a ballot.

Lord DUDLEY fixed Jan. 23rd as the day on which the votes should be counted and the result of the ballot declared.

The proceedings then terminated with a hearty vote of thanks to Lord Dudley for taking the chair.

THE LORD MAYOR'S APPEAL FOR GUY'S HOSPITAL.

THE Lord Mayor (Alderman Sir J. Dimsdale, M.P.) presided over a meeting held at the Mansion House on Jan. 15th for the purpose of supporting the appeal for funds which is now being made for Guy's Hospital. The meeting was an exceptionally large one and the proceedings throughout were marked with great enthusiasm. The most important part of them was, perhaps, the announcement of the total sum of money contributed towards the £180,000 required for the renovation and building fund, and much satisfaction was expressed when it was found that no less than £64,000 had been subscribed.

The LORD MAYOR opened the meeting by a speech in which he gave some historical facts concerning Guy's Hospital. He said that the rich and the well-to-do were quite as much assisted as the suffering poor by reason of the teaching carried on in the medical schools and the results of the untiring labours of the hospital physicians and surgeons. The results of the education given in the schools and wards were not confined to the hospital alone or to the great metropolis alone, but were at the disposal of the community at large and benefited not only this kingdom but the empire. It was a regrettable fact that owing to the want of funds wards were still closed and could not be re-opened until the benevolent public gave the wherewithal to keep them in active use. Since the year 1880 agricultural depression had caused a depreciation in the income of the hospital amounting to nearly 50 per cent. The financial statement of the affairs could be put in a nutshell. To carry on the hospital efficiently and well and to make it worthy of being one of the great hospitals of London it was necessary to have an income of £60,000 a year. The only reliable income was £35,000 a year, and £25,000 a year were required in addition for the proper carrying out of the work of the institution after it had been repaired and renovated so as to make it abreast of the times. It was certain that unless its wards were healthy and sanitary the hospital had better not exist. £180,000 were wanted to bring the hospital up to date; the fabric itself wanted renovating, the wards and the adjuncts of the wards required reorganisation; and the theatres, the medical college, and the nurses' home, all required money. They must have as well a first-rate laundry and proper sanitary arrangements. The Lord Mayor then gave in detail the work that was done by the hospital.

Mr. COSMO BONSOR, the treasurer of the hospital, said that to open 150 closed beds under modern conditions of medical science and professional nursing required a heavy expenditure. The sum of money necessary to build a nurses' home for 230 sisters and nurses was large, but the governors had been encouraged to do this by the generosity of the late Mr. H. Raphael who called upon Mr. Bonsor one very cold morning in the winter and, after having seen the attics in which the nurses were lodged and noted the crowded condition of their sleeping accommodation, gave a cheque for £20,000 for a nurses' home.

The following motion was proposed by Mr. LEOPOLD DE ROTHSCHILD, seconded by the Hon. ALBAN GIBBS, M.P., supported by Mr. A. C. COLE and Mr. R. K. CAUSTON, M.P., and carried unanimously:—

That this meeting having heard the speech of the Right Hon. the Lord Mayor and the statement of the treasurer showing the present urgent financial needs of Guy's Hospital, earnestly commends the same to the support of the citizens of London and to the benevolent public throughout the country, in the hope that sufficient assistance may be immediately rendered to enable the governors to maintain the work of that great institution in a state of completeness and efficiency.

Dr. FREDERICK TAYLOR, senior physician of the hospital, in moving a vote of thanks to the Lord Mayor thanked him for affording the opportunity of making that appeal at the Mansion House.

Mr. H. G. HOWSE, President of the Royal College of Surgeons of England and senior surgeon to the hospital, in seconding the motion for the vote of thanks, drew attention to the enormous change that had taken place in surgery in the last 30 years, requiring surgeons to spend a large part of their time in operating theatres.

Mr. COSMO BONSOR declared the vote of thanks to be passed with acclamation, and after a short reply from the LORD MAYOR the proceedings ended.

CREDITON SICK NURSING ASSOCIATION.—The annual meeting of the promoters of this association was held at the Masonic Hall, Crediton, on Jan. 9th, when Lady Audrey Buller, president of the association, occupied the chair. The report of the association stated that the work during 1901 had pursued its usual even course. The financial report was satisfactory, the subscriptions and donations amounting to £103 16*s.* 10*d.*, and the receipts from paying patients to £16 5*s.* 6*d.* The nurse's statement of work showed that 327 cases had been attended during the year and the nurse had paid 4416 visits. Of these patients 66 had recovered, 30 had been relieved, three had been removed to the workhouse, 17 had died, one had been removed to a convalescent home, and 15 were still on the books. Of the £10 granted for relief £8 18*s.* had been expended. The financial statement showed the total receipts to be £127 17*s.* 10*d.* and the expenditure to amount to £100 18*s.*, leaving a balance in hand of £26 19*s.* 10*d.* The endowment fund stood at £197 5*s.* 10*d.*, against £222 5*s.* 10*d.* in the previous year, £25 having been transferred to the maternity fund.

SEAMEN'S HOSPITAL SOCIETY.—At a quarterly general court of the governors of the Seamen's Hospital Society held at the Institute of Chartered Accountants, Moorgate-place, E.C., on Jan. 10th, it was stated that the work of the society had been progressing satisfactorily and that 25,249 patients had been treated in the various hospitals and dispensaries of the society during the past 12 months. 72 students had entered the School of Tropical Medicine during the past year. The committee of management regretted to state that the society's income had fallen short of the expenditure during the past 12 months, so much so that the offer of a convalescent home had been refused, as the committee had not felt that they could undertake the liability of its maintenance.

THE LANCET RELIEF FUND.

Almoners.

THIS Fund, which came into operation on the 1st of February, 1889, has for its Almoners the President of the Royal College of Physicians of London (Sir WILLIAM SELBY CHURCH, Bart., M.D. Oxon., F.R.C.P. Lond.), the President of the Royal College of Surgeons of England (Mr. HENRY GREENWAY HOWSE, M.B., F.R.C.S. Eng.), the President of the General Medical Council (Sir WILLIAM TURNER, K.C.B., M.B. Lond., F.R.C.S. Eng. and Edin., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S. Eng., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D. Cantab., F.R.C.P. Lond., as Honorary Auditor.

Scope of the Fund.

FOR the guidance of those seeking assistance and of those desirous of recommending deserving cases, it may be useful to record that THE LANCET Relief Fund is sustained solely by the Proprietors of THE LANCET, who provide every January the sum of at least £300, which is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners, or to their widows and orphans, in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require. In the case of widows and orphans, in order to come within the scope of the Fund, the death of the Husband or Father must have been of recent occurrence.

Chronic Cases ineligible.

WHEN the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established, and, as a result, the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. As the Almoners still receive applications for assistance for cases which are obviously of a *chronic* character, it is thought advisable to append a statement concerning cases of this nature which appeared in THE LANCET of Feb. 16th, 1889:—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registered medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected emergency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief"—

And who, it may be again pointed out, are likely to be permanently benefited thereby.

THIRTEENTH ANNUAL REPORT of the ALMONERS

For the year ending December 31, 1901.

IN presenting their Thirteenth Annual Report, the Almoners have to record that the balance in hand on Dec. 31st, 1900, was £352 17*s.* 4*d.*, to which, on Jan. 1st, 1901, the Proprietors of THE LANCET added the sum of £300, making a total sum of £652 17*s.* 4*d.* available for grants during the year 1901.

The number of applications for assistance received by the Almoners during the year was 82, of which 21 were so obviously outside the scope of the Fund that they were rejected by the Secretary by virtue of the discretionary power conferred upon him by the Almoners at their meeting on Jan. 1st, 1890; 4 were rejected by the Almoners after due consideration; in 14 cases Forms were sent but failed to be returned—probably the applicants recognised that their cases were outside the scope of the Fund; 1 applicant returned the Form but failed to comply with the rules as to the necessary testimonials; 1 applicant had been misinformed as to the nature of the Fund, and "preferred to try to battle with my present troubles rather than expose my poverty" by seeking the required testimonials; 3 applications remained uncompleted at the end of the year; 35 applicants were relieved by gifts of money ranging from £5 to £20; 2 applicants were granted loans; and 1 applicant was relieved by a guarantee of his funeral expenses, which enabled him to enter a convalescent home. The relief of the 37 cases, a detailed list of which is given in the accompanying Statement of Accounts, involved the expenditure of the sum of £383 10*s.*—the largest amount granted in any one year since the inauguration of the Fund in 1889.

The most gratifying feature in the administration of the Fund is the letters received by the Almoners from those whom they have helped, expressing their gratitude for the prompt relief which has enabled them to mitigate, and in not a few cases to overcome, their difficulties. In this connexion it may not be uninteresting to record the fact that on several occasions the Almoners have been able to consider cases and to grant relief on the actual day on which the application was received.

With reference to the gradually decreasing number of loans advanced from the Fund—in the year under review there were but two—the Almoners desire to point out that they are becoming more and more averse to affording assistance by this means, as their experience is that in but very few cases are loans ever repaid. The Almoners do not offer any explanation why there should be this neglect on the part of borrowers to fulfil their obligations: they are content to record the fact, and to act in the future on the principle of *Experientia docet.*

It is as unavoidable, perhaps, as it certainly is very regrettable, that in the administration of such a Fund as

this—the very essence of the object of which is *prompt* relief in urgent cases—there should be a loophole for the fraudulent obtaining of its assistance. To give that immediate relief so necessary in the majority of cases, the Almoners must necessarily rely largely upon the statements made by the applicants and upon the covering testimonials required from medical men and from clergymen or ministers of religion in the districts in which the applicants reside. Two instances of fraud—both committed by the same person—have, the Almoners regret to say, been brought to their knowledge during the past year, in which grants were obtained in the year 1900 by means of alse statements and of forged testimonials. It is difficult to devise a means of wholly defeating such infamous conduct without subjecting worthy applicants for assistance to unnecessary delay and possibly painful inquiry into the causes of their distress; but every practicable effort will continue to be made to safeguard the funds at the disposal of the Almoners.

Mr. Henry Greenway Howse, F.R.C.S. Eng., having succeeded the late Sir William Mac Cormac as President of the Royal College of Surgeons of England in July last, thereupon became an Almoner of the Fund. The present Almoners desire to record their appreciation of the late Sir William Mac Cormac's services to the Fund for five years and the excellent advice which he was ever ready to give.

(Signed)

W. S. CHURCH (Chairman). H. G. HOWSE.
THOMAS WAKLEY.
WM. TURNER. THOMAS WAKLEY, Jun.

THE LANCET RELIEF FUND.

STATEMENT OF ACCOUNTS FOR THE YEAR ENDING DEC. 31st, 1901.

DR.	£	s.	d.
To Balance at the London and Westminster Bank, Limited (Westminster Branch), Jan. 1st, 1901	352	17	4
,, Proprietors of THE LANCET, Jan. 1st, 1901 ...	300	0	0
,, Repayment of Loans	*Nil.*		
	£652	17	4

CR.	£	s.	d.	£	s.	d.
By Loans:—						
Case No. 492	10	0	0			
,, 513	30	0	0			
				40	0	0
By Gifts:—						
Case No. 491	20	0	0			
,, 493	5	0	0			
,, 494	5	0	0			
,, 495	5	0	0			
,, 496	10	0	0			
,, 497	10	0	0			
,, 498	10	0	0			
,, 499	10	0	0			
,, 500	15	0	0			
,, 502	10	0	0			
,, 504	10	0	0			
,, 505	5	0	0			
,, 506	10	0	0			
,, 508	6	0	0			
,, 509	10	0	0			
,, 510	10	0	0			
,, 514	20	0	0			
,, 515	10	0	0			
,, 516	5	0	0			
,, 517	5	0	0			
,, 518	10	0	0			
,, 519	10	0	0			
,, 520	20	0	0			
,, 521	15	0	0			
,, 522	5	0	0			
,, 524	10	0	0			
,, 525	10	0	0			
,, 526	10	0	0			
,, 527	10	0	0			
,, 529	10	0	0			
,, 530	20	0	0			
,, 531	10	0	0			
,, 532	12	10	0			
				343	10	0
Balance at Bank, Dec. 31, 1901 ...				269	7	4
				£652	17	4

I find by the Bankers' Book that the actual Balance on Jan. 1st, 1901, to the credit of the Fund was £352 17*s.* 4*d.*, to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 1st, 1901.

The balance at the Bank on Dec. 31st, 1901, was the sum of £269 7*s.* 4*d.* I have also checked the receipts for disbursements and find the above account strictly accurate.

January 6th, 1902. HENRY A. PITMAN, Hon. Auditor.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 75 of the largest English towns 9422 births and 5183 deaths were registered during the week ending Jan. 11th. The annual rate of mortality in these towns, which had been 20·1 per 1000 in the preceding week, declined last week to 18·3 per 1000. In London the death-rate was 18·6 per 1000, while it averaged 18·1 in the 74 other large towns. The lowest death-rates in these towns were 5·5 in Hornsey, 9·3 in Wallasey, 9·5 in East Ham, 10·3 in Kings Norton, 10·7 in Northampton, 10·8 in Walthamstow, 11·0 in Smethwick, 11·6 in Barrow-in-Furness, and 12·2 in Handsworth; the highest rates were 22·6 in Reading, 23·3 in Rotherham, 23·6 in Bootle, 25·2 in Preston, 26·3 in Rhondda, and 28·8 in Wigan. The 5183 deaths in these towns included 482 which were referred to the principal zymotic diseases, against 510 in the preceding week; of these 482 deaths 124 resulted from measles, 82 from diphtheria, 78 from whooping-cough, 58 from scarlet fever, 53 from small-pox, 45 from "fever" (principally enteric), and 42 from diarrhœa. In Hornsey, Norwich, Rochdale, Huddersfield, and in nine other smaller towns, no death was recorded during the week from any of these diseases; in the other towns they caused the highest death-rates in Norwich, Birmingham, Aston Manor, Grimsby, Salford, Preston, Rotherham, York, and Middlesbrough. The greatest proportional mortality from measles occurred in Great Yarmouth, Aston Manor, Grimsby, Preston, Sheffield, Rotherham, York, and South Shields; from scarlet fever in Wolverhampton, St. Helens, and Middlesbrough; from diphtheria in Hanley and Cardiff; from whooping-cough in East Ham and Rhondda; from "fever" in Smethwick and Birkenhead; and from diarrhœa in Wolverhampton and Bury. Small-pox caused 45 deaths in London, four in West Ham, two in East Ham, one in Croydon, and one in Willesden, but not one in any other of the 75 large towns. There were 872 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Jan. 11th, against 506, 538, and 666 at the end of the three preceding weeks; 305 new cases were admitted during the week, against 161, 226, and 261 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3033 and 3137 on the two preceding Saturdays, had further declined to 2864 at the end of last week; 250 new cases were admitted during the week, against 247, 263, and 313 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 393, 425, and 452 in the three preceding weeks, declined again last week to 361, and were 284 below the corrected average number. The causes of 73, or 1·4 per cent., of the deaths in the 75 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Norwich, Leicester, Nottingham, Bolton, Salford, and in 39 other smaller towns; the largest proportions of uncertified deaths were registered in St. Helens and Northampton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·5, 22·6, and 23·2 per 1000 in the three preceding weeks, declined again to 19·6 during the week ending Jan. 11th, but exceeded by 1·3 the mean rate during the same period in the 75 large English towns. The rates in the eight Scotch towns ranged from 10·9 in Perth and 16·0 in Paisley to 20·5 in Glasgow and 21·0 in Greenock. The 633 deaths in these towns included 23 which were referred to measles, 19 to diarrhœa, five to whooping-cough, four to diphtheria, three to "fever," and two to scarlet fever. In all 56 deaths resulted from these principal zymotic diseases last week, against 86 and 70 in the two preceding weeks. These 56 deaths were equal to an annual rate of 1·7 per 1000, which was also the mean rate last week from the same diseases in the 75 large English towns. The fatal cases of measles, which had been 36 and 30 in the two preceding weeks, further declined again last week to 23, of which 19 occurred in Glasgow and four in Dundee. The deaths from diarrhœa, which had been 23 and 12 in the two preceding weeks, rose again to 19 last week, and included 11 in Glasgow, three in Aberdeen, and two in Paisley. The fatal cases of whooping-cough, which had been seven and 12 in the two preceding weeks, declined again last week to five, of which two were registered in Glasgow and two in Edinburgh. The two deaths from scarlet fever were both recorded in Greenock and two of the three fatal cases of "fever" in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 188, 166, and 182 in the three preceding weeks, declined again last week to 142, but exceeded by 19 the number in the corresponding period of last year. The causes of 28, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·9, 26·8, and 29·4 per 1000 in the three preceding weeks, declined again to 25·0 per 1000 during the week ending Jan. 11th. During the past four weeks the death-rate has averaged 26·8 per 1000, the rates during the same period being 19·6 in London and 20·9 in Edinburgh. The 182 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 32 from the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 15, 10 and nine in the three preceding weeks; of these three resulted from diphtheria, three from "fever," two from whooping-cough, one from measles, and one from diarrhœa. These 10 deaths were equal to an annual rate of 1·4 per 1000, the zymotic death-rate during the same period being 1·9 in London and 0·6 in Edinburgh. The fatal cases of diphtheria, which had been three, two, and three in the three preceding weeks, were again three last week. The deaths referred to different forms of "fever," which had been four, five, and two in the three preceding weeks, rose again last week to three. The mortality from whooping-cough exceeded that recorded in the preceding week; while that from diarrhœa showed a decline. The 182 deaths in Dublin last week included 23 of children under one year of age and 57 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons were slightly less numerous than in the preceding week. Five inquest cases and six deaths from violence were registered; and 79, or more than one-third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1901.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 10·6 per 1000 of the population, estimated at 4,543,757 in the middle of last year. In the three preceding months the rates had been 12·4, 13·8, and 11·6 per 1000 respectively. The rates were considerably below the average in Kensington, City of Westminster, St. Marylebone, Shoreditch, Lambeth, and Woolwich; while they showed the largest excess in St. Pancras, Holborn, Bethnal Green, Southwark, and Camberwell. During the four weeks ending Dec. 28th, 656 cases of small-pox were notified in London, against 157, 347, and 413 in the three preceding months; of these cases 99 belonged to Holborn, 84 to Stepney, 73 to St. Pancras, 48 to Southwark, 41 to Battersea, 32 to Poplar, and 30 to Finsbury. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 163, 284, and 427 at the end of the three preceding months, had further risen to 666 on Dec. 28th; the weekly admissions averaged 173, against 44, 72, and 110, in the three preceding months. The prevalence of scarlet fever showed a considerable decline from that recorded in any recent month; among the various metropolitan boroughs this disease was proportionally most prevalent in Stoke Newington, Finsbury, Bermondsey, Camberwell, Deptford, and Greenwich. The Metropolitan Asylums hospitals contained 3080 scarlet fever patients on Dec. 28th, against 3096, 3281, and 3186 at the end of the three preceding months; the weekly admissions averaged 297, against 288, 412, 939, and 352 in the three preceding

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING DECEMBER, 1901.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1901.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœal diseases.	Total.	Annual rate per 1000 persons living.			
LONDON	4,543,757	656	1475	953	—	198	2	18	405	—	3707	10·6	90	244	52	128	63	—	28	—	50	655	1·9	6558	18·8	173
West Districts.																										
Paddington	144,154	8	32	36	—	7	—	1	10	—	94	8·5	—	7	—	4	—	—	—	—	2	13	1·2	171	15·5	155
Kensington	176,787	5	39	16	—	5	—	—	15	—	80	5·9	1	36	5	2	2	—	—	—	3	49	3·6	264	19·5	200
Hammersmith	112,619	28	12	13	—	4	—	—	11	—	68	7·9	11	23	2	—	—	—	—	—	3	39	4·5	211	24·4	244
Fulham	138,426	15	40	60	—	6	—	—	15	—	136	12·8	3	9	1	8	1	—	1	—	7	30	2·8	193	18·2	172
Chelsea	73,879	1	18	15	—	4	—	—	1	—	39	6·9	1	—	1	2	1	—	—	—	—	5	0·9	109	19·2	228
City of Westminster	182,502	18	26	17	—	5	—	—	7	—	73	5·2	4	22	—	—	—	—	3	—	1	30	2·1	242	17·3	182
North Districts.																										
St. Marylebone	133,060	13	35	12	—	7	—	1	9	—	67	6·6	1	1	2	2	—	—	—	—	3	9	0·9	195	19·1	129
Hampstead	82,287	1	26	12	—	2	1	1	3	—	46	7·3	—	—	—	—	—	—	—	—	2	2	0·3	72	11·4	143
St. Pancras	235,297	73	83	101	—	11	—	2	26	—	296	16·4	7	10	4	13	3	—	2	—	—	39	2·2	349	19·3	147
Islington	335,325	16	106	77	—	16	—	3	22	—	240	9·3	4	45	4	13	2	—	6	—	2	76	3·0	497	19·3	187
Stoke Newington	51,328	9	24	6	—	5	—	—	3	—	47	11·9	2	—	—	1	—	—	1	—	—	4	1·0	54	13·7	154
Hackney	219,780	10	75	83	—	12	—	—	31	—	211	12·5	1	2	3	10	3	—	2	—	1	22	1·3	278	16·5	146
Central Districts.																										
Holborn	59,205	99	17	15	—	4	—	—	8	—	143	31·5	12	—	1	2	—	—	2	—	—	17	3·7	112	24·7	99
Finsbury	101,233	30	46	11	—	2	—	—	10	—	99	12·7	2	2	1	6	2	—	—	—	—	13	1·7	182	23·4	201
City of London	26,627	4	10	7	—	2	—	—	1	—	24	11·7	2	—	—	1	—	—	—	—	—	3	1·5	42	20·6	297
East Districts.																										
Shoreditch	118,564	11	21	13	—	3	—	1	8	—	57	6·3	4	16	1	1	2	—	—	—	3	27	3·0	229	25·2	242
Bethnal Green	129,700	15	50	40	—	8	—	1	17	—	131	13·2	1	12	5	10	2	—	—	—	—	30	3·0	241	24·2	218
Stepney	298,884	84	100	54	—	10	—	—	28	—	276	12·0	11	10	4	5	9	—	2	—	5	46	2·0	445	19·4	171
Poplar	168,887	32	50	39	—	8	—	2	21	—	152	11·7	4	6	1	4	8	—	2	—	5	30	2·3	256	19·9	164
South Districts.																										
Southwark	206,219	48	90	34	—	11	—	—	24	—	207	13·1	6	3	5	5	—	—	1	—	1	21	1·3	323	20·4	119
Bermondsey	130,348	19	70	11	—	9	—	—	9	—	118	11·8	5	—	4	2	1	—	—	—	—	12	1·2	227	22·7	234
Lambeth	302,460	19	64	42	—	12	1	—	20	—	158	6·8	1	16	1	9	7	—	2	—	2	38	1·6	440	19·0	156
Battersea	169,364	41	58	19	—	9	—	—	10	—	137	10·5	1	7	1	2	2	—	3	—	3	19	1·5	225	17·3	184
Wandsworth	233,943	14	65	53	—	6	—	1	25	—	164	9·1	2	8	1	4	2	—	—	—	2	19	1·1	270	15·0	180
Camberwell	259,897	20	169	82	—	14	—	2	35	—	322	16·2	—	2	3	10	6	—	—	—	1	22	1·1	350	17·6	143
Deptford	110,752	1	50	23	—	3	—	—	4	—	81	9·5	1	1	1	7	1	—	—	—	1	12	1·4	150	17·7	152
Greenwich	96,188	6	47	23	—	5	—	—	10	—	91	12·3	3	1	—	3	—	—	1	—	—	8	1·1	125	16·9	179
Lewisham	128,423	5	35	31	—	3	—	2	14	—	90	9·1	—	3	1	2	8	—	—	—	2	16	1·6	160	16·2	172
Woolwich	117,619	11	26	8	—	4	—	1	8	—	58	6·4	—	2	—	—	1	—	—	—	1	4	0·4	144	16·0	189
Port of London	—	—	1	—	—	1	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

months. Diphtheria was also less prevalent during December than it had been in either of the two preceding months; the greatest proportional prevalence of this disease occurred in Fulham, St. Pancras, Hackney, Bethnal Green, and Camberwell. There were 1369 diphtheria patients under treatment at the end of last month, against 1499, 1570, and 1504 at the end of the three preceding months; the weekly admissions averaged 160, against 248, 243, and 200 in the three preceding months. The prevalence of enteric fever showed some diminution as compared with that in recent months; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in Chelsea, Stoke Newington, Hackney, Holborn, Bethnal Green, Bermondsey, and Camberwell. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 292, 291, and 245 at the end of the three preceding months, had further declined to 195 on Dec. 28th; the weekly admissions averaged 21, against 50, 38, and 32 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Holborn, Bethnal Poplar, Southwark, and Camberwell. The 18 cases of puerperal fever included three in Islington, and two each in St. Pancras, Poplar, Camberwell, and Lewisham.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Dec. 28th the deaths of 6558 persons belonging to London were registered, equal to an annual rate of 18·8 per 1000, against 15·4, 15·4, and 20·0 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 11·4 in Hampstead, 13·7 in Stoke Newington, 15·0 in Wandsworth, 15·5 in Paddington, 16·0 in Woolwich, and 16·2 in Lewisham; the highest rates were 22·7 in Bermondsey, 23·4 in Finsbury, 24·2 in Bethnal Green, 24·4 in Hammersmith, 24·7 in Holborn, and 25·2 in Shoreditch. The 6558 deaths from all causes during the month included 655 which were referred to the principal zymotic diseases; of these 90 resulted from small-pox, 244 from measles, 52 from scarlet fever, 128 from diphtheria, 63 from whooping-cough, 28 from enteric fever, and 50 from diarrhœa. The lowest death-rates from these diseases were recorded in Chelsea, St. Marylebone, Hampstead, Stoke Newington, and Woolwich, and the highest rates in Kensington, Hammersmith, Islington, Holborn, Shoreditch, and Bethnal Green. The fatal cases of small-pox, which had been 24, 29, and 73 in the three preceding months, further rose last month to 90, of which 12 belonged to Holborn, 11 to Hammersmith, 11 to Stepney, seven to St. Pancras, six to Southwark, and five to Bermondsey. The 244 deaths from measles showed a slight increase over the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, Hammersmith, City of Westminster, Islington, Shoreditch, and Bethnal Green. The 52 fatal cases of scarlet fever were considerably less than the corrected average number; the greatest proportional fatality from this disease occurred in Kensington, St. Pancras, Bethnal Green, Southwark, and Bermondsey. The 128 deaths from diphtheria were 83 below the average number in the last four weeks of the 10 preceding years; the metropolitan boroughs in which the greatest proportional mortality from this disease was recorded were Fulham, St. Pancras, Finsbury, Bethnal Green, and Deptford. The 63 fatal cases of whooping-cough showed a decline of more than 100 from the corrected average number; this disease was proportionally most fatal in Stepney, Poplar, Lambeth, Camberwell, and Lewisham. The 28 deaths referred to enteric fever were 111 less than the average number in the corresponding periods of the 10 preceding years; the highest "fever" death-rates last week were recorded in City of Westminster, Islington, Holborn, and Battersea. The 50 fatal cases of diarrhœa were slightly below the corrected average number; among the various metropolitan boroughs the greatest proportional fatality from this disease occurred in Hammersmith, Fulham, St. Marylebone, Hampstead, Shoreditch, and Poplar. In conclusion, it may be stated that the aggregate mortality in London from these diseases during December was more than 18·8 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths among children under one year of age to registered births, was equal to 173 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, Hackney, Holborn, Southwark, and Camberwell; and the highest rates in Hammersmith, Chelsea, Finsbury, City of London, Shoreditch, Bethnal Green, and Bermondsey.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: W. S. Lightfoot to the *Eagle*; E. H. Saunders to the *Vivid* for Keyham Naval Barracks; J. Dudley to the *Lion*; and A. Patterson to the *Vivid* for Devonport Dockyard. Staff Surgeons: J. Barry to Haslar Hospital, temporary; J. Jenkins to the *Andromache*; R. Miller to the *Liffey*; and A. MacLean to the *Collingwood*. Surgeons: G. T. Bishop to Haslar Hospital; G. M. O. Richards to the *Irresistible*; A. H. Prichard to the *Redbreast*; and J. S. Dudding to the *Antelope*.

ROYAL ARMY MEDICAL CORPS.

Colonel J. H. Moore, retires on retired pay on account ill-health.

VOLUNTEER CORPS.

Royal Engineers: 2nd Gloucester (the Bristol): Surgeon-Lieutenant T. Carwardine resigns his commission. *Rifle:* 2nd Volunteer Battalion the Northumberland Fusiliers: Surgeon-Lieutenant D. K. Muir to be Surgeon-Captain. 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: The undermentioned officer resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement: Surgeon-Captain R. L. Batterbury. 3rd Volunteer Battalion the South Wales Borderers: John William Davies is re-appointed Surgeon-Captain. 3rd (the Blythswood) Volunteer Battalion the Highland Light Infantry: Surgeon-Lieutenant J. W. Logie to be Surgeon-Captain.

SOUTH AFRICAN WAR NOTES.

Civil Surgeon Reid who was reported to be severely wounded at Tweefontein was Godfrey Forrest Reid, M.A., M.D., B.Ch. Dub., late district surgeon at Bethlehem, Orange River Colony, South Africa. He died on Dec. 27th, 1901.

The following have been discharged from hospital to duty: Major D. R. Hamilton, R.A.M.C., Captain C. B. Martin, R.A.M.C., and Lieutenant W. J. P. Adye-Curran, R.A.M.C. Major D. R. Hamilton is returning home from South Africa in the *Kildonan Castle*.

AFFAIRS IN SOUTH AFRICA.

As regards our military progress and the general aspect of affairs in South Africa the reports from that country are on the whole satisfactory. Among the many other unexpected things which have occurred in the course of this war no one appears to have foreseen that while Mr. Kruger was safely taking his opulent ease in Europe his *confrère*, Mr. Steyn, would be still found in the field, and that many of the hardest and most obstinate of our foes as well as some of the most redoubtable leaders of the Boers should have come from his part of the country and not from the Transvaal; but so it is. It was only to be expected that with the present season there should be an increase of enteric fever among our troops serving in South Africa, and a glance at the sick returns which have been recently published suffices to show that such has been the case. There is, unhappily, a good deal of this fever at the present time and the causes of it must be indeed widely spread, for it would seem that wherever there are British troops cases of enteric fever are almost sure to occur. Both in this country and in the colonies there exists naturally enough a good deal of indignation at the accusations of all kinds that have appeared in the continental press—of Germany in particular—against our officers and men in South Africa. We need not say that they are utterly unfounded and are so base and absurd, indeed, that it is surprising they should ever have been published, or if published, credited, by intelligent and decent people.

THE PRINCIPAL MEDICAL OFFICER IN INDIA.

Colonel Sir Thomas Gallwey, K.C.M.G., C.B., R.A.M.C., who is selected for appointment as Principal Medical Officer in India with the rank of Surgeon-General, is

now in his forty-ninth year. He will pass over the heads of a number of officers of his rank; but in the present list of surgeon-generals there are many who are not far from retirement for age. Surgeon-General W. S. M. Price, A.M.S., now acting as Principal Medical Officer in India, has seen his fifty-eighth birthday, and was disqualified for the Indian Government, it is understood, because he had less than three years to serve before retirement by age.

MEDICAL AID FOR SOLDIERS ON FURLOUGH.

Soldiers on furlough who require medical aid and who are unable by reason of distance from a military station to apply for it to the officer commanding, may in future obtain the services of a civil medical practitioner, to whom they are to show their furlough paper, and the medical man will be allowed to claim from the War Office for attendance, medicines, and the like at the rate laid down in the Royal Warrant.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At a quarterly meeting of the directors of the Naval Medical Supplemental Fund held on Jan. 14th, Sir J. N. Dick, K.C.B., being in the chair, the sum of £75 was distributed among the several applicants.

Correspondence.

"Audi alteram partem."

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—In the autumn of 1900 you were good enough to allow me to call the attention of the younger metropolitan members of the profession to the advantages offered by the above society. The result was that last year we enrolled 35 new members. May I venture again to trespass on your kindness in order to point out that any qualified medical man residing within 20 miles of Charing-cross can be proposed as a member, the annual subscription being two guineas, payable for 25 years? But any annual subscriber may become a life-member within 10 years of his election by making up his subscription to 25 guineas if he shall have been under 30 years of age, to 30 guineas if he shall have been under 40 years of age, and to 35 guineas if he shall have been over 40 years of age at the time of his election as a member of the society. For the especial benefit of young members I may point out that a member under 30 years of age at the time of his election can compound for a single payment of 20 guineas, under 40 for 25 guineas, and over 40 for 30 guineas, thereby becoming a life-member and his widow at once being eligible for a grant should her circumstances unfortunately justify it. The secretary is Mr. J. B. Blackett, 11, Chandos-street, Cavendish-square, London, W.

I am, Sirs, yours faithfully,

Jan. 13th, 1902. CHRISTOPHER HEATH, President.

AN UNUSUAL COMPLICATION OF INFLUENZA.

To the Editors of THE LANCET.

SIRS,—Although it is an ungrateful task to call in question the accuracy of a brother practitioner's diagnosis, particularly in a case which one has not himself seen and examined, yet I venture to ask Mr. J. G. Carruthers whether the case reported by him under the above heading in THE LANCET of Jan. 11th, page 89, may not bear another interpretation. Certainly the diagnosis of influenza does not carry with it conviction to my mind. Surely "typical influenza" would not progress "in the usual manner" from Nov. 11th to Dec. 1st. It is, of course, a matter for regret that no post-mortem examination was made. But from the clinical side alone the case reads very like one of typhoid fever terminating fatally in the fourth week by intestinal hæmorrhage. Perhaps Mr. Carruthers will kindly furnish your readers with the details of the case, particularly in regard to the behaviour of the temperature, in order that, in accordance with his request, they may be in a better position to offer an explanation of the complication which he describes.

I am, Sirs, yours faithfully,

JOHN W. MOORE.

Dublin, Jan. 11th, 1902.

THE RELATION OF THE CHURCH TO SANITARY REFORM.

To the Editors of THE LANCET.

SIRS,—Most of the remarks in the leading article entitled, "The Church and Sanitary Reform," in THE LANCET of Jan. 11th (p. 104), are very timely and will be welcome to the clergy who (like myself) set a high value on the close alliance which has subsisted since the time of Jesus Christ and His apostles between spiritual teaching and physical healing. I fear that the structural defects of our churches from the sanitary standpoint are almost beyond our reach as clergy, for architects are proverbially self-opinionated; but I doubt whether places of public assembly are one-hundredth part so dangerous as the badly-ventilated rooms where people habitually dwell. Our churches, even when crowded on Sundays, are tolerably full of fresh air most of the week, and after a large experience of public halls I can safely say that the air is purer there than in most dwellings. Had you instanced the ventilation of our elementary day-schools there would have been better support for your arguments. Most of them at 4 P.M. are scandalously oppressive.

With regard to the last part of your article I do not think that the rubric alluded to contemplates the question of infection at all. The only rubric that does so is the last one in the office for communicating the sick; in which you will see there is special provision for excusing friends and neighbours from participation. Clergy who officiate at private no less than at public celebrations are expected reverently to consume all that remains of the consecrated elements, and therefore the Church accepts (for the ministry at any rate) whatever risks there may be. Life assurance societies are agreed that they are very few. This problem would become a negligible quantity if ministers who hand the chalice to communicants would wipe the edge with a fair linen cloth as they pass from one to another. The subsequent treatment of such "purificators" is very well understood. Anglicans consider withholding the chalice from the laity to be an evasion of the words, "Drink ye all of this"; and there is a suggestion of fellowship and affection in the mutual use of one vessel for many communicants which we should be loth to lose.

I am, Sirs, yours faithfully,

C. ARTHUR LANE.

St. Mark's Lodge, New Barnet, Herts, Jan. 13th, 1902.

To the Editors of THE LANCET.

SIRS,—With reference to the annotation on "The Relation of the Church to Sanitary Reform," in THE LANCET of Jan. 4th, p. 104, there is much truth, no doubt, in what is said therein, though it is to be questioned whether in these days of independent thought and action the influence of the clergyman is not over-estimated. I am writing, however, to express a much-felt want in connexion with the vaccination question—viz., that of good serviceable "literature" in the form of pamphlets, circulars, and bright, telling tracts suitable for distribution, reading at mothers' meetings, and for posting the clergy and others up in the incontestible facts and figures which are necessary to convince the obdurate. Even we clergymen's wives might do something for the cause amongst the women if we had such. The subject of vaccination was recently put down for debate at a working-man's club in this parish, but the leader lamented to me beforehand that he had no statistics on which to rely, only a general sense that vaccination was wise and desirable. We are frequently inundated with pamphlets from the anti-vaccinationists, anti-vivisectionists, non-flesh-eating, and kindred faddists, but of the sort mentioned above none come our way. Is it not time, with the probability of the near spread of small-pox, that this should be remedied? I am emboldened to add name and address in the hope that one of your readers may either send us some such literature or enlighten us as to where it may be obtained. I am, Sirs, yours faithfully,

ELLEN HOWELL.

All Saints' Vicarage, Derby, Jan. 14th, 1902.

*** If our correspondent will write to Dr. Francis T. Bond

of Gloucester, the honorary secretary of the Jenner Society, she will get every information. The society does a most valuable work and is worthy of every support.—ED. L.

To the Editors of THE LANCET.

SIRS,—Referring to the excellent annotation in your issue of Jan. 11th (p. 104) on the Relation of the Church to Sanitary Reform may I say that for the last 25 years in the administration of the cup at Holy Communion I and my colleagues have invariably used a small linen cloth to cleanse the lip of the cup after each communicant has participated? There are more reasons than one for so doing, and I have received the thanks of many for observing a precaution which unfortunately is not universally adopted. And at the communion of the sick I always request the sick person, who, of course, communicates last, to finish what little wine remains in the cup, and this is in strict accordance with the sixth rubric at the end of the Office for the Administration of Holy Communion.

My experience extends to some thousands of communicants per year, and, so far as I can trace, not one instance of mischief has resulted from the passing on of the sacred cup with the simple precaution above named.

I am, Sirs, yours faithfully,

Jan. 11th, 1902. VICAR.

CANCER IN INDIA AND IN CHINA.

To the Editors of THE LANCET.

SIRS,—As a correspondence on this subject is going on in your columns, it has occurred to me that your readers might like to hear the results of inquiries made by me in this direction.

In the absence of statistical reports as to the prevalence of cancer and other diseases in India, all estimates hitherto made must be regarded as tentative and conjectural. The great extent of the country and the teeming millions of its population, make it very difficult even for those who have been long resident there in a professional capacity to arrive at correct conclusions. The few hospitals in India draw their patients from immense multitudes and vast areas, so that although many cases of cancer may be constantly under treatment, the proportionate prevalence of the disease in the general population, may be much less than the medical officers of these institutions are apt to believe. It is, however, certain that neither the rice-eating Hindoos nor the flesh-eating Mahomedans are exempt. Nearly all those who have specially studied this subject believe that cancer is comparatively rare in India—much rarer, for instance, than in England. This was Walshe's opinion, and he supported it by reference to the annual report of the Bengal Medical College (1844–45), which showed that of 4080 male patients under treatment there, during a period of three years, only three were affected with cancer; and of 701 female patients, only two were cancerous, the uterus being the organ affected in both cases.

Among recent authors Davidson is of the same opinion and in support he mentions the fact that of 2657 operations at the Afzulgung Hospital at Hyderabad in 1886 only two were for cancer, while in Bombay only one per 1000 of the total deaths were due to it.

On the other hand, McLeod states[1] that malignant tumours are common among the natives of Bengal, both in hospital and private practice; in females the breast is the part chiefly affected, and in males the cutaneous system, oral cavity, and especially the penis. Hendley's experience at the Jeypore Hospital accords with this, for during the period 1880–88—when the hospital was under his charge—102 major operations were undertaken for the treatment of malignant disease. As further information seemed desirable I wrote to Surgeon-Lieutenant-Colonel Lawrie of Hyderabad calling his attention to the foregoing statement. He kindly replied as follows: "My experience of cancer is that it is as frequent in India as in England, and I have formed this opinion from observations in Calcutta, Lahore, and Hyderabad. The Afzulgung Hospital was under my charge in 1886, and that year was no exception to the rule. The small number of operations for cancer shows nothing, except that the people are averse to operation for most diseases other than stone and cataract."

[1] Operative Surgery in Calcutta, 1885, p. 102.

With regard to the prevalence of malignant tumours in the vast North-Western Provinces and the Punjab I am indebted to Mr. Freyer for the following information. He writes: "The general impression on my mind, after 17 years of active surgical work among the poor and rich of this part of India, is that tumours of all kinds—including cancer and sarcoma—are extremely common. Epithelioma of the tongue and penis and scirrhus of the breast are particularly common." Four-fifths of the inhabitants of these provinces are Hindoos who, with few exceptions, in accordance with the precepts of their religion, never eat meat. The other fifth—being Mahomedans—may eat meat, but they are practically vegetarians, as they can seldom afford the luxury of animal food. Among these people stone also is very common.

In Kashmir, Orissa, Madras, Anam, and Cochin cancer is said to be more prevalent than in adjacent communities. The report of the Kashmir Mission Hospital for 1898, by Dr. Neve, shows that 195 operations for tumours were done in the course of the year, 70 for cancer (including 11 of the female breast), and 16 for sarcoma (including a very large one of the lower jaw and another of the abdominal wall).

Nearly all the older writers on the geographical distribution of cancer agree in stating that cancer is more prevalent in China than in any other Asiatic country. Desiring to obtain recent information on this subject I wrote to Mr. Cantlie who was then Government surgeon at Hong-Kong. He very obligingly replied as follows: "I do not think I have been without a case of malignant disease under my care ever since I came to China six years ago." Of 3608 consecutive Chinese hospital in-patients under his care 114 had cancer, or 3·1 per cent. This proportion is almost identical with that met with in large London general hospitals, like St. Bartholomew's, where I have ascertained that 3·5 per cent. of the in-patients have cancer. Of Mr. Cantlie's 114 Chinese cancer patients the primary seats of the disease were as follows: female breast, 38; upper jaw, 25; lower jaw, 14; penis, 9; uterus, 8; parotid, 5; hip, 5; tongue, 4; lip, 3; and thigh, 3. At Dr. Kerr's hospital in Canton during the year 1887 30 cases of malignant tumours were operated on, including 11 amputations of the female breast. Strange to relate Mr. Cantlie has never met with cancer of the stomach among the Chinese. With regard to their diet he says: "All Chinamen eat fish and pork at morning and evening meals. Fowls and ducks are always on the table of all but the most humble of the coolie class, and they do not have them because they cannot afford them. I hope this will be a sufficient answer to those who maintain that Chinamen live on rice. It is not nearly so true as that the Scotch live on porridge." Dr. Elizabeth Reifsnyder of Shanghai (1895) says that cancer of the uterus and female breast is very common in that part of China, where ovarian cystomata are also often met with.

I am, Sirs, yours faithfully,

Clifton, Bristol, Jan. 10th, 1902. W. ROGER WILLIAMS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 21st, 1901, p. 1763, your readers are told by Lieutenant-Colonel J. Maitland, I.M.S., that "Mr. C. B. Keetley, writing upon the subject of cancer, states that he had been informed by Dr. C. N. Saldanha that 'Hindoos suffer comparatively little from cancer.' Upon this statement of the comparative immunity of Hindoos from cancer both Dr. Saldanha and Mr. Keetley base certain arguments regarding the prophylaxis of the disease." Now, my hypotheses as to *carcinoma* were published in THE LANCET of August 31st (p. 584), the abstract of Dr. Saldanha's letter not until Oct. 5th (p. 939), and my comment on this letter was simply that my hypotheses "seemed to receive a certain small measure of support from some of the facts stated—e.g., the freedom of the Hindoos from cancer and their carefulness to cleanse their skins." I no more made myself responsible for Dr. Saldanha's statements than I am going to for Lieutenant-Colonel Maitland's; and my hypothesis is no more based on them than Somerset House is based on Waterloo Bridge. Again, in THE LANCET of Jan. 4th Captain C. Donovan, I.M.S., intervened, writing that "it was a pity Mr. Keetley did not refer to the annual reports of the medical institutions of India, obtainable at three or four accredited booksellers in London, before accepting the *ipse dixits* of Dr. Saldanha." I am much obliged to Captain Donovan for telling me about these reports and these booksellers, and should be more

obliged if he had added the address of one of the accredited persons.

I will now deal with Lieutenant-Colonel Maitland and Captain Donovan exactly on the same principles as those which I applied in dealing with Dr. Saldanha, and Captain Donovan will find the process quite different from a mere acceptance of *ipse dixits*. Lieutenant-Colonel Maitland says that in Madras "cancer is very prevalent amongst Hindoos." Captain Donovan says that "Colonel Maitland speaks for the Madras General Hospital where cases from all over the Madras Presidency come for operation." Lieutenant-Colonel Maitland I myself may add, occupies the high position of senior surgeon to that hospital and professor of surgery in the university. The population of the Madras Presidency is 40,000,000 and that of the city 500,000, of whom nearly four-fifths are Hindoos. What does Lieutenant-Colonel Maitland write when he comes to figures? He says: "In the wards of the Madras General Hospital cases of cancer affecting Hindoos are *almost* always to be found. At the time that I write I have *three* Hindoos in my wards suffering from the disease." The italics are mine, "*almost* always." "*Three*." And they come from among 40,000,000 of people, 30,000,000 of whom are Hindoos!

No one has said that the Hindoos *never* suffer from cancer. What I said in my paper of August 31st was that they rarely suffered from cancer of the *stomach*. Neither Lieutenant-Colonel Maitland nor Captain Donovan mention the stomach, although they refer to cancer of "the penis, the jaws, throat, cervix uteri, and breasts, &c." Unless the reference is somewhere concealed in this "&c." I am at a loss to know what bearing Captain Donovan's letter really has on the substance of my paper, or why he should plunge into the discussion at all, especially in a manner so reckless that, even in correcting the form "Hindoo," his reproof falls as heavily on Colonel Maitland and on the dictionaries as on me. He goes on to say, "Of course, the word 'Hindoos' is employed by Mr. Keetley in a very loose sense and might have passed muster 50 years ago as of sufficient scientific accuracy, but in this more enlightened twentieth century," &c., in the same style. The term "Hindoos" is employed by me as referring to Hindoos only. It is not used by me at all except in reference to Dr. Saldanha's letter. In my original paper I asked gentlemen for facts bearing on my hypothesis, and particularly requested (1) that the distinction between carcinoma and sarcoma should be carefully observed, and (2) for exact references to published sources of information. In spite of this "enlightened twentieth century" and its "scientific accuracy," neither Captain Donovan nor any of the other gentlemen who have responded has paid the slightest attention to these reasonable requests. Each flings his general impressions at my head as if they were half-bricks. But each gentleman, whether gentle or otherwise, remains responsible for his own statements so long as I refer to him when referring to them.

Perhaps some Indian medical officer will kindly tell me whether the Mahomedans circumcise or not. I have asked a number of well-informed and travelled people this question in vain. Of the four parts to which Lieutenant-Colonel Maitland refers as "very common" seats of cancer in Madras two are the penis and the uterus. He also says that cancer is much more common among Hindoos than among Mahomedans. Now, in THE LANCET of Dec. 1st (p. 1764), Dr. H. R. Andrews, quoted by Dr. James Braithwaite, says that "the Jews are much less subject to cancer than we are and that they are especially free from cancer of the uterus." Dr. Braithwaite says that this is because the Jews take so little salt, but on that point Mr. M. Bernstein contradicts him absolutely in the same page (p. 1764). There is one, and perhaps only one, point of difference between Jews and most Christians on which we shall all agree—viz., that the Jews have less foreskin and therefore less accumulation of smegma præputialis than persons with foreskins. Now the first part of my hypothesis, as given on August 31st, is that the "specific cause" of carcinoma "flourishes in either the secretions or the cells of the skin-glands, including the mammary gland—e.g., milk, butter, cheese, *sebaceous material, and sweat*"; smegma præputialis I specially mention in THE LANCET of Oct. 5th (p. 939). The bearing of this on the occurrence of cancer of the uterus is obvious. Its bearing on the frequency of cancer elsewhere is also clear, though less obvious, and it is important, because if carcinoma is in any way a contagious disease any increase or decrease of cancer in a situation like the penis or the uterus, where it is attended by discharge, is an increase or decrease of foci of infection, and therefore leads to increased or decreased general frequency of the disease.

There are other ways, I acknowledge, in which circumcision may diminish the frequency of carcinoma—viz., by lessening liability to syphilis and gonorrhœa and to other causes of chronic ulcerations which may lead the way to carcinoma.

Lastly, may I wish success to your efforts to obtain the appointment of a commission to inquire into the causes of cancer?

I am, Sirs, yours faithfully,

Grosvenor-street, W., Jan. 10th, 1902. C. B. KEETLEY.

VOLKMANN'S CONTRACTURE.

To the Editors of THE LANCET.

SIRS,—A point of great importance has been omitted from my paper on Volkmann's Contracture owing to a mistake of mine during the correction of the proof-sheets. It is to the effect that Professor Oppenheim of Berlin refers briefly to ischæmic paralysis in his "Text-book of Nervous Diseases," 1900. Here he emphasises the importance of *normal* electrical reactions as the most characteristic feature in the diagnosis of this deformity.

I am, Sirs, yours faithfully,

Jan. 11th, 1902. LEONARD S. DUDGEON.

To the Editors of THE LANCET.

SIRS,—I have read Mr. Leonard S. Dudgeon's paper on "Volkmann's Contracture" in THE LANCET of Jan. 11th, p. 78, with great interest. "Volkmann's contracture" appears to me to be so much better a way of naming the deformity than "ischæmic paralysis"; it commits us to no theory as to causation. There is one slight error in the paper which I hope I may be pardoned for correcting. Mr. Dudgeon says, "Tendon lengthening first advised by Mr. Page has since been carried out by Mr. Littlewood, Mr. Barnard, and others, &c." If Mr. Dudgeon will again refer to the cases he has quoted he will see that I performed the operation on Dec. 5th, 1898, and that Mr. Page performed his operation on Dec. 20th, 1898, 15 days later. Since performing the two operations referred to I have operated on a third case, with a very satisfactory result, the inclosed short notes of which I shall be glad if you will insert. A female child, aged three years, was admitted under my care into the Leeds Infirmary on August 12th, 1900. She was suffering from the typical deformity—Volkmann's contracture. This had appeared after a fracture of the lower end of the right humerus in May, 1900. The fracture was treated with an anterior rectangular splint, which was kept on for five days; on being removed a large sore was found on the anterior surface of the forearm, near the elbow-joint. At the time of the operation there was a large scar in this position and the contracture was extreme. The operation was performed on August 28th, 1900. All the tendons were lengthened on the front of the forearm. It was a difficult operation, as the tendons were such slender structures. In this case I lengthened them so that I could put up the fingers in the slightly hyper-extended position. The patient made a good recovery. I saw her yesterday (Jan. 12th, 1902). She has now quite an excellent hand, with full use in it.

I am, Sirs, yours faithfully,

Leeds, Jan. 13th, 1902. H. LITTLEWOOD.

THE LIVERPOOL PATHOLOGICAL DIAGNOSIS SOCIETY.

To the Editors of THE LANCET.

SIRS,—As clinical pathology is in its infancy and will claim an increasing number of workers the question as to the fees of the above society and of pathologists generally should be now considered by a representative committee. I trust Mr. C. Powell White will initiate such action. I think no one will seriously deny that the work is worthy of consulting fees. Such is the opinion of most London hospital medical staffs. There can only remain the broader question whether medical services are adequately rewarded when compared, say, with the legal profession or trade. The comparison is unfavourable, more especially when we consider the value of our work to the community. It would be to the interests of both the profession and the public to consider fully whether this branch of medicine alone should be underpaid. Public bodies and charitable institutions

should afford such facilities to the poorer classes, but to allow the well-to-do to escape a just toll must react eventually injuriously on one and all. Precisely as cheap medical and surgical institutions are unsound in principle and harmful to the majority, so also are cheap pathological institutes. I think gratitude is owed to Mr. White for bringing forward this important question once more.

I am, Sirs, yours faithfully,

Plymouth, Jan. 11th, 1902. F. BUSHNELL.

FIRST AID FOR PRIMARY HÆMORRHAGE: THE WRONG TEACHING GIVEN TO AMBULANCE CLASSES.

To the Editors of THE LANCET.

SIRS,—"The notions stated to have been acquired at ambulance classes" are certainly startling if the holders of first-aid certificates "have got the idea fixed in their minds that they must always apply some sort of an improvised tourniquet to the limb above the bleeding part," and this treatment to include "cases of ruptured varicose veins, superficial lacerated wounds, and compound fractures." It is still more startling to be told that these "notions" are in accordance with what "they had been taught to do." I do not suppose that I have either more or less common sense than any of the other honorary surgeons of the St. John Ambulance Association, but for my own part I strongly repudiate such absurd teaching as Mr. Walter G. Spencer lays to the charge of ambulance teachers. I quite agree with him as to the great danger of the tourniquet in the hands of ambulance pupils. Will Mr. Spencer kindly state what the comrades ought to have done in the following case which I extract from the *Daily Mail* of Jan. 7th? "Wm. Hickman had both his legs cut off in a chaff-cutting machine which he was working yesterday at Messrs. Whittome and Co.'s, Islington. He died before he could be taken to hospital." I am, Sirs, yours faithfully,

Ongar, Essex, Jan. 8th, 1902. J. D. G. GIDLEY-MOORE.

To the Editors of THE LANCET.

SIRS,—Permit me to endorse the opinions of my co-lecturers and examiners of the St. John Ambulance Association whose letters on first aid in primary hæmorrhage appeared in THE LANCET of Jan. 11th, p. 117. The first-aid treatment of hæmorrhage is most clearly and soundly laid down in the text-book of the association, and I submit that no one can take exception to that instruction, which I find, after a considerable experience as an examiner, is most strongly emphasised by the lecturers. It is not always easy to instil these principles into the minds of some of our pupils, but such ones seldom succeed in gaining the certificate. Moreover, many of the pupils fail to see the necessity of attending more than one course of lectures and hence forget the knowledge they have gained. But these facts do not detract from the correctness of the instruction which is given to the classes.

Your correspondent Mr. Fenoulhet is right in suggesting that a somewhat more prolonged course of instruction would be beneficial, but in a great number of classes this plan is carried out by lecturers, much to the advantage of the pupils. I am quite sure that when intelligently carried out first aid has been often the means of bringing to the doors of medical men "living" patients instead of "dead" people.

I am, Sirs, yours faithfully,

Streatham, S.W., Jan. 13th, 1902. M. COATES.

To the Editors of THE LANCET.

SIRS,—Permit me through your columns to express my thanks to Mr. Walter G. Spencer for his admirable letter upon this subject. I am sorry to say that I have taught the errors alluded to until this winter, but having seen many cases on a par with those so fully stated by him I had no difficulty in convincing myself that the present teaching was as erroneous as it was injurious and for the first time decided not to teach a class except in my own way. Here arose difficulties which I could not brush aside. If I taught my own views my pupils would not pass the necessary examination, and their chances of gaining the valuable cups, &c., given for competition would be *nil*, and to teach as formerly was out of the question. In this dilemma I wrote to the secretary of the Fife Colliery Surgeons' Association asking permission to express my views on the subject at its next meeting on Nov. 23rd, 1901. He replied that he was pleased to hear of my intentions, but unfortunately this letter was followed by another on Dec. 3rd in which it is stated that my "remarks could be received only informally, the main object of the association hitherto being for the ethical side of our profession."

After such a snub I need scarcely add that my paper was not read, that my class is still unopened, and my pupils as anxious as ever. My views and cases run parallel with those mentioned by Mr. Spencer, and with very slight modifications I agree with his treatment. Now, Sirs, What am I to do? I trust that Mr. Spencer's letter will be more successful in arousing the profession *generally* to take an interest in this matter which I failed to obtain *locally*—and that someone will reply to my query—What am I to do?

I am, Sirs, yours faithfully,

JOHN MACDONALD, L.R.C.P. Edin.

Lochgelly, Fife, N.B., Jan. 15th, 1902.

THE SANATORIUM TREATMENT OF CONSUMPTION.

To the Editors of THE LANCET.

SIRS,—It would be wise to pause and to consider whether the money now being provided for sanatoriums to *cure* consumption could not be more advantageously spent to *prevent* the same by producing over large areas the hygienic conditions under which tuberculous diseases slowly and surely die out. Dr. Lubbock of Norwich, who taught an out-door active life, open windows in dormitories, beef-steaks and porter, has done much good for those who have condescended to learn of a *provincial* Englishman.

I am, Sirs, yours faithfully,

Framlingham. GEO. E. JEAFFRESON.

REVACCINATION.

To the Editors of THE LANCET.

SIRS,—In view of the present epidemic of small-pox in London it would be highly instructive as well as interesting to know what percentage of persons attacked by the disease had been *successfully revaccinated*, and whether cases have occurred of persons who had recently (say, within six months) been revaccinated contracting the disease. Perhaps some of your correspondents who are on the medical staff of the small-pox hospitals would kindly afford me this information.

I am, Sirs, yours faithfully,

Jan. 8th, 1902. J. BRANDER, L.R.C.P. & L.R.C.S. Edin.

SUSCEPTIBILITY TO REVACCINATION.

To the Editors of THE LANCET.

SIRS,—While thoroughly agreeing with Dr. F. W. Andrewes that the publication of statistics by various practitioners would be of use to the cause of vaccination, I fear that there will be great discrepancies owing to the various methods of vaccination employed, and this will be well instanced by a comparison of the results obtained by Dr. Andrewes and by myself. Curiously enough he has vaccinated at St. Bartholomew's Hospital 171 persons, and in the midst of a large number of vaccinations recently performed by me I have a batch of 193 revaccinations performed at one place—namely, the office of the Ocean Accident Corporation in Moorgate-street, E.C.; of these 162 were males and 31 were female clerks or officials on the staff. Out of the whole number of revaccinations there was not one single failure, all the arms developing well-marked vesicles in the three places scarified. Among these cases six had been recently vaccinated with negative result, but in my hands they showed no insusceptibility. In 140 cases the vesicles were large and well formed, being 72·53 per cent.; in 31 cases the vesicles were moderate in size, being 16·06 per cent.; and in 22 cases the vesicles were small but not under a quarter of an inch in diameter, being just under 11·4 per cent.

With regard to these results I think it right to say that the only lymph used was that of the Jenner Institute, obtained through Messrs. Allen and Hanbury, and the method of vaccinating was as follows. The arms were first washed with

soap and warm water and, in the cases of the men, shaved; the region where vaccination was to take place was then well rubbed with hot boric acid solution (saturated) and afterwards dried with boric lint. The vaccine was placed on the skin in three places and the epidermis was scratched through the vaccine with a blunt lancet; hardly any blood was perceptible, merely a slight discolouration appearing. The ages of the persons revaccinated were between 15 and 65 years, and all ranks of life were represented, from the higher official at £1000 a year to the engineer's labourer at 30s. a week. In these cases and in a large number of others I have had no failure, every case, in all sorts and conditions of men and women, taking well without undue inflammation or enlargement of glands. The women have all been vaccinated on the shoulder at their own request and have as a consequence suffered much more than the men who have been vaccinated on the outer side of the left forearm where the vesicles cause little inconvenience.

I have carefully tested the results of the use of shields or covering of any kind during the last three months and I am confirmed in my previous conviction that every appliance of the sort is injurious and harmful, the inflammation being increased by heat or pressure or by both; great pain is caused by lint sticking to the vesicles, and I have especially noticed that the wire guards by circumscribing the area of the swelling cause very much increased suffering. I have had the best results when the following directions have been carried out: the undervest sleeve should be turned up and nothing worn under the sleeve of the white shirt which is always very loose; where a coloured shirt is worn, a piece of clean, soft, old cambric handkerchief should be tacked to the inside of the coloured sleeve. The vesicles are in this way hardly touched by the sleeve and the arm is kept cool. The only application I recommend is a liberal and frequent dusting with vinolia powder and I find that with these precautions the vesicles are, as a rule, dry and unbroken.

In large offices there will always be a certain number of conscientious objectors. When I began at the Ocean Office many declined to be vaccinated, others went to private vaccinators, but when the results of the arms were seen, everyone came to me; and I mention this as I feel sure that the results were due to careful antiseptic methods, the lancet being sterilised with boiling water between each separate vaccination.—I am, Sirs, yours faithfully,

ALBERT BENTHALL, F.R.C.P. Edin.

Tavistock-square, W.C., Jan. 12th, 1902.

THE SANITARY CONDITION OF LEICESTER INFIRMARY.

To the Editors of THE LANCET.

SIRS,—As I notice an article in THE LANCET of Jan. 11th, p. 113, on the sanitary condition of Leicester Infirmary, summarising the results "of a joint conference between the weekly board and the honorary medical staff of the Leicester Infirmary" with respect to my recommendations as to the sanitary condition of that institution, which report agrees with almost all of my recommendations, but in which there is a sentence which you have quoted as follows:—

> Sufficient cause has not been shown to justify Professor Corfield's opinion that "the whole of the present drainage arrangements must be condemned and removed entirely and new drains laid, &c."—

I write to inform you that my reason for giving that opinion was that all the drains tested by the architect or by myself were found to leak badly—a fact which, in my opinion, quite justifies the recommendation, which is, I consider, one of the most important and necessary recommendations in my report. It is nowadays axiomatic amongst sanitarians that the drains, especially those of such an institution, whether inside or outside the building, should be watertight.—I am, Sirs, yours faithfully,

W. H. CORFIELD.
Consulting Sanitary Adviser to His Majesty's Office of Works.

Savile-row, W., Jan. 15th, 1902.

ARTIFICIALLY MATURED (?) WHISKY.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Jan 11th, p. 109, a short annotation on the artificial maturation (?) of spirits. Although no reference is made, I presume the article was partially occasioned by the paper which I read before the Society of Chemical Industry on Monday, Jan. 6th. I would point out that the process I proposed affected only the aldehydes of the spirits, the higher alcohols, fatty acids, esters and basic constituents remaining untouched. Under no circumstances can I think it very advantageous to leave in aldehydes, especially furfurol, when one considers the work of Curci, Magnan, and Laborde and the later publication of Brunton and Tunnicliffe in THE LANCET of Dec. 8th, 1900, p. 1643. As a chemist I should be very glad to know what are the opinions of physiologists on the effect of aldehydes.

I am, Sirs, yours faithfully,

East London Technical College, Jan. 11th, 1902. J. T. HEWITT.

THE DANGERS OF A COMMON COLD.

To the Editors of THE LANCET.

SIRS,—Dr. H. Willoughby Gardner, in his interesting letter in THE LANCET of Dec. 14th, 1901, p. 1697, advances many striking arguments, but he does not prove his thesis. That there is an infectious cold no medical man who goes about with his eyes open, as your correspondent says, can doubt, but the question is whether this is the only kind. The immunity of isolated bodies of men may show that this is the commoner kind, but as the examples given were lusty adults they do not prove that it is the only kind. Men in good condition seldom catch cold. It is a rare thing for a rowing crew to catch cold, although the coxswain and conch often suffer. The stories are incomplete, for they do not show that this complaint existed in the European settlements where the travellers caught their first cold. In the case of Conway's men it was a "bad cold," and to make the story complete we should know whether bad colds were troubling the little settlement. It would be a curious complication of the question if temporary immunity leads to a worse cold in the end. The immunity in long sea-voyages is better evidence, for the manner of life is that of civilisation, but the ordinary sailor is notorious for his dislike to ventilation; so here it is difficult to understand why colds, if infectious, should die out, for one attack certainly does not protect. If the immunity of open-air sanatoriums is complete this is strong evidence, especially as they receive so many catarrhal subjects; but the inmates are living an artificial life and their immunity may be due to other causes than the absence of infection. They eat largely without indigestion, but this does not prove that dyspepsia is due to specific infection. On the whole, the evidence of "no infection, no cold" is strong, but not conclusive.

On the other side is the weight of almost universal opinion in the past, both lay and medical, which ought to go for something, although Dr. Gardner may well smile at the ready histories of exposure given by subjects of an obviously contagious cold; there is similarly a history of an accident connected with most gouty joints. But there is other evidence. Colds, especially amongst the children of the poor, are far more common when the wind is in the east and when, therefore, sudden chills are common. A cold wind will set up eczema and conjunctivitis and therefore it seems probable that it may cause catarrh of the nasal mucous membrane. The phenomenon of what is termed "hay fever" seems to prove that coryza can be set up by causes other than infection, and in many patients a cold much resembles an attack of hay fever. The variations in duration of the incubation period, and of the length of the established attack, the common occurrence of abortive attacks, and the fact that one attack does not protect, all militate against the view that there is a single definite infection.

I feel sure in my own mind that there are persons, for example, who suffer from a cold if they sit in wet boots, and that the symptoms come on within a few hours and are generally ushered in with sneezing; I think this happens with sufficient certainty to exclude infection. Of course, there may be an infection generally distributed throughout the civilised world, and a chilled blood-stream may let this enemy in, but this is hardly what is meant when colds are said to be due to a specific infection. More probable is the view that these rapidly developing colds are, like migraine, a disturbance of the vaso-motor system. A recent writer states, I know not on what authority, that "sneezing is a sign of life in the east but of death in the west." It certainly is a sign of a commencing cold in the west, and when this symptom commences almost immediately on exposure to cold it is difficult to believe that infection has any part in

the cause of the attack. It is a commonly noted fact that the very sick seldom sneeze and they do not take cold easily, although they often suffer severely when a cold is epidemic, so perhaps a certain amount of vigour is necessary to develop a non-infectious cold, and it may be the expression of an effort of nature to protect the subject exposed, and may be compared to the uselessly excessive inflammation that often follows injuries. There is a tendency in writers on this interesting subject to rush from one extreme to the other, as our profession has so often done in the past. The infectious cold is now publicly recognised, but with our present knowledge I am sure it is premature to declare it to be the only cold and to advise general isolation. It would mean, amongst other things, the closing of all elementary schools whenever the wind was in the east and the turning out from public meetings any who coughed or sneezed. I believe that the key to the problem lies in differentiating the various kinds of colds, and if we can do this clinically the bacteriologist will have a far better chance of helping us.

I read Dr. Gardner's letter with great pleasure, and I sincerely hope that he may be right, for it would be a delightful thing to get rid of the "cold" bogey and to be no longer compelled to keep the youngsters off the wet grass. If we could obtain some positive knowledge on this subject we should remove a great reproach from our profession, for at present it is said that we know neither the cause nor the cure even of such a common thing as an ordinary cold.

I am, Sirs, yours faithfully,

O. CLAYTON JONES, M.B. Oxon.

Ilfracombe, Dec. 14th, 1901.

CONTRACT PRACTICE IN NORTH WALES.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you would allow me to make use of your columns to draw the attention of your readers to the following facts. Up to this year all the friendly societies in this town were attended by one firm of two brothers. During the year 1901 the various societies started a movement to change their club rules in order that each member might at the beginning of each year choose which of the five resident medical practitioners he would have to attend him in case of illness. Under the old rule the rate of pay was 3*s.* 6*d.* per member per annum. After two of the societies—of which there are three in question—had altered their rules to this effect the resident medical practitioners met in conference and decided that under the new conditions 5*s.* per member per annum would be the minimum that they could accept, and an intimation to this effect was made to the societies. This they all rejected as being an exorbitant demand, and instead of sending the new rules for ratification to the Registrar of Friendly Societies they tried to get an outside practitioner to take them all at the old rate. I am glad to be able to state that one gentleman with whom they were in communication has, after becoming acquainted with all the facts, absolutely declined to accept the post.—I am, Sirs, yours faithfully,

Dolgelly, Jan. 10th, 1902. A DOLGELLEY PRACTITIONER.

A PATIENT'S AVERSION TO MEDICAL MEN AND ITS CONSEQUENCE.—Last week we referred to the death of a man at Derby who preferred to be attended by an unqualified practitioner. On Jan. 11th the coroner for West Bromwich held an inquest at the Dartmouth Hotel, West Bromwich, concerning the death of a woman, aged 45 years, who died suddenly on Jan. 9th. The deceased had been ailing since August last and had occasionally seen a medical man, but had not during the last four months received proper medical attention, because she had a strong aversion to medical men. In spite of protest by her husband and daughter she always declined to see a qualified medical man, but becoming worse on Jan. 9th a medical man was called in. The woman, however, died from heart disease. It was stated that the deceased was a very hard-working woman and would prefer to spend what money she had on her family rather than on medical attendance for herself. The coroner thought that in these cases the services of the parish medical officer should be obtained and that his attendance would avert the necessity of holding a public inquiry. The jury returned a verdict of "Death from natural causes," but added that the woman's end was brought about in a measure by over-work and self-neglect.

THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

THE WORKING-CLASSES AND THE BIRMINGHAM GENERAL DISPENSARY.

Now that the practitioners of Birmingham have organised a strong medical union the problems to be solved assume a practical as well as a theoretical interest. Prominent among these is the question of the Birmingham General Dispensary. The importance of this institution can be gathered from the figures given in the last annual report. The receipts from all sources then amounted to £9554. The cost of the surgeries, the surgical appliances, and the drugs is put down at £1786. The consulting physician received £157 10*s.* and the consulting surgeon £157 10*s.* The salaries of the resident medical officers amounted to £2179, those of the dispensers to £836; the secretary's collecting office expenses to £598; the servants' wages to £729; and the cab-hire for the medical officers to £298. The rest was spent in advertisements, insurances, coal, gas, and taxes, and £105 were given to the District Nursing Society. There is generally a good credit balance carried over. The number of patients treated on presentation of a ticket has greatly increased. In 1880 there were 17,759 such patients. In 1890 they increased to 26,030 and in 1895 the figure was 32,774. In 1900, the number of patients admitted by ticket was 43,678, which is an augmentation of 2513 on the previous year. It will be seen, therefore, that the number of patients has more than doubled in 20 years. Can it be said that the number of persons who are worthy subjects of charity has more than doubled in the last 20 years? Has England sunk so low, has the misery in these islands become so wide-spread, that charities must be doubled in extent so as to bring the needed relief? Evidently this is not the case and the increase of patients at this dispensary has no relationship whatsoever with the increase of poverty. The very reverse is the case. Whatever may be the effect of the war on the wages and incomes of the inhabitants of Great Britain taken as a whole, it is absolutely certain that the inhabitants of Birmingham have been reaping a golden harvest. Never were the working classes there so fully employed and never was so much overtime done. If other industries have suffered that of the manufacture of small arms, of cartridges, and of dynamite, for which Birmingham is the centre, has been overwhelmed with orders and with work. Therefore the need of charity in the form of medical relief should have considerably decreased while the war provided so much extra employment. But we find, on the contrary, that there were 2513 more patients who applied to the Birmingham General Dispensary in the year 1900 than in the year 1899. Evidently, therefore, the increase of patients is not due to an increase of poverty. Consequently there must be an abuse of this charity.

The rule is, that every person who subscribes a guinea to the dispensary may vote for the election of the governors, and he receives eight tickets, which he may give to poor patients, and such patients will be entitled to medical treatment for one month. But it is also stated that "every governor recommending a person as a patient shall satisfy himself that the person is a proper object for charitable relief." If these were the only rules then there would be no further abuse than that which under similar circumstances arises all over the country, and which is due to indiscretion and carelessness on the part of those who give away the tickets. In our series of articles on Hospital Abuse numerous instances of such indiscretion have been given, and, taken by itself, this constitutes a serious grievance. Nevertheless this is a comparatively easy matter to deal with. The fault clearly lies with those who give away the tickets. They should be more careful and should take the trouble to ascertain whether the persons among whom they distribute the tickets are really worthy subjects for charitable relief. These remarks do not apply especially to Birmingham or to dispensaries, but also to hospitals and to every part of the kingdom where tickets are given in exchange for subscriptions to charitable institutions. The grievance special to Birmingham and which accounts for the enormous increase of patients attending at the Birmingham General Dispensary finds its origin in the weekly collections made in factories

and workshops on behalf of the Hospital Saturday Fund. The working-classes are imbued with the principle that payment confers the right to vote, a principle confirmed by the rule of the dispensary which gives a vote and eight tickets to the donor of one guinea. But as no individual working-man was likely to give a guinea it was not supposed that working-men would elect governors and they were still less likely themselves to become governors. In this, however, no account was taken of the spirit of organisation bred out of the Hospital Saturday Fund. The weekly levies would not have been tolerated for so long had they not been made to confer rights; and so large is the sum thus obtained that the working-classes are beginning to imagine that they have bought up every institution in the town. The working-man is far too well acquainted with the advantages of organisation to give his pennies directly to the dispensary. That would be an act of pure charity on his part, for he would receive nothing in return. He therefore institutes what is called a works club. All the workmen engaged in a factory pool their subscriptions till they have collected a sum of perhaps £2 2*s.* for the dispensary, and then the secretary of the works club hands over this sum to the dispensary and consequently receives 16 tickets and is entitled to vote for the election of governors. Thus the working-men not only vote, but they have elected fellow-workmen as governors of the dispensary. These working-men governors are by far the most energetic and regular attendants on the committee of management. They have a personal interest at stake, whereas the rich people who subscribe guineas do so purely from benevolent motives and do not anticipate utilising the dispensary for their own purposes. The workmen, on the contrary, look upon the dispensary as a means of obtaining cheap medical attendance and of thus economising the medical fees which they would otherwise have to pay. They do not give the tickets they receive in exchange for the guineas which they have collected to persons who are "proper objects for charitable relief," but they utilise them for themselves or their families.

The idea, however, that the dispensary was a charity was somewhat humiliating, and the workmen having obtained representation on the board of management the rules were forthwith altered. The tickets given to the secretaries of the works clubs no longer bear the inscription, "a proper object for charitable relief," but the words, "whom I believe to be deserving of medical relief." A gentleman who gives his medical adviser a liberal fee is certainly deserving of medical relief, and the workman who has subscribed regularly to his works club does not fail to consider himself equally deserving of medical relief. He pays less, but the relief is given in a less costly manner. Consequently the workman concludes that he only receives that to which he is fully entitled, and he would be deeply offended if he were considered the recipient of charity. Yet it cannot be insisted too often and too clearly that he *is* in receipt of charity. The charity is twofold: it is a charity in hard cash and a charity in the form of underpaid or partially gratuitous medical service. Eight tickets are given for a guinea, that is 2*s.* 7½*d.* per ticket. The annual report says that in 1900 the average cost of the patients was 3*s.* 9·2*d.*, or 1*s.* 2*d.* less than it was in the previous year. Therefore each patient cost in hard cash and on an average over 1*s.* last year, and over 2*s.* the previous year, more than the sum actually paid for him, and this does not take into account the value of the professional advice which was given and which should represent a much larger sum. Therefore the dispensary remains a charity in spite of the pretension of the subscribers to works clubs that they pay for what they receive.

One of the worst features of this system and one which works out very injuriously to the interest of the medical profession, is that it gives relief just when it is least needed and does not give relief when it might be legitimately claimed. It has been calculated that on an average the members of works clubs can receive two tickets per annum. As this entitles the bearer to a month's treatment for each ticket he need not pay medical fees when suffering from an ordinary illness. This, however, is just the time when artisans and other persons of small means can afford to pay medical fees. On the other hand, should the illness be of so prolonged and serious a character that it lasts more than two months, then even those who when well are in receipt of good wages may be excused if they can no longer continue to pay for medical attendance. But it is just at this moment that the assistance rendered by the works club fails. The patient, having had his two tickets for the dispensary, cannot claim more, and yet by that time his resources are exhausted. Thus he obtains charity when he has no legitimate claim and when at a later period of sickness he might fairly be considered to be a worthy subject for charitable assistance it is withheld from him. It will be seen that the system is altogether wrong. What was intended as a pure charity has become in part a provident organisation. The subscribers to the works clubs take great care to let the medical officers of the dispensary know that they are not like the other patients, but have paid. By this they infer that they are not in receipt of charity; but this is a false conception. The figures given above show that they are in receipt of charity, and the ugliest feature of the abuse is that these thrifty, industrious, and careful workmen who have the forethought to subscribe regularly to their works club are, by receiving this charity, depriving the poor who really need it and for whom it was intended. The genuine poor find considerable difficulty in getting tickets for the dispensary. They must go about and beg for them, whereas the thrifty and well-to-do artisan has his ticket waiting for him at the works where he is employed. He has but to say a word and it is given to him, for he can claim it as a right. It is only when he ceases to be in a good position, when prolonged illness has exhausted his savings, when he really and urgently needs help, that the help is no longer forthcoming. It is for men in this latter stage, for those who are in real distress, that the medical officers are willing to give their services for nothing or for very reduced rates of payment. As matters now stand the opposite obtains. If there were not so many well-to-do patients frequenting the dispensary the whole, instead of only a part, of the resources of that institution would be available for the relief of the genuine poor. On the other hand, the general practitioner would have many more private paying patients among that class which can well afford to pay at least for a short period of time the usual small fees charged. It is only when the resources of the patient are exhausted that he should be allowed to claim the assistance of a charitable institution such as the Birmingham General Dispensary.

There are actually 11 resident medical officers employed by this institution, and, if properly managed, it would afford a very good opening for young practitioners. The medical officers are first engaged for £150 a year and £30 more are allowed for cab-hire. As no account has to be rendered it is probable that this latter sum is not all spent in cabs. Then the medical officer has a residence provided for him at the central offices in Union-street. After a while he is promoted to one of the branches and on removing he generally obtains an increase in his salary of £20. Of course, he is not allowed to have any private practice. After one or two years of branch work he may suggest another increase and sometimes he will get it, sometimes it will be refused. When accorded it generally amounts to another £20. Out of the 11 resident medical officers there are now four who have obtained this second increase in their salaries. The patients are well disciplined. The door for receiving messages asking the medical officer to call on a patient is closed punctually at 10 in the morning. The medical officers have, as a rule, about 15 visits to pay every day; but, of course, in this there is no regularity, and sometimes there are as many as 45 visits to be paid in a single day. Generally speaking, however, these patients can all be attended to in the morning. Then the out-patients come to the surgery at 2.30 P.M. As the greater number are suffering from chronic diseases—bronchitis, phthisis, &c.—it is frequently only necessary to repeat the mixture previously prescribed. Such patients can be disposed of very rapidly and thus a considerable amount of time may be devoted to a new and interesting case. This latter consideration may contribute to explain the popularity of the dispensary. The ordinary club medical officer is likely to be in a hurry to go to see his private and paying patients. Time is of greater object to him. The dispensary medical officer is young, is seeking to acquire experience, he has no private patients, the whole afternoon and evening are before him, and he is but rarely called out at night. This is all excellent in its way and very fortunate for the poor, but it altogether misses its mark if it attracts well-to-do patients. There is also an impression prevalent that the medicines given out at the dispensary are of a superior quality. This is erroneous, but nevertheless it serves to attract many patients. It is, however, true that

at the dispensary there is a more lavish distribution of bandages and ointments, &c. Therefore, many workmen prefer paying to go to the dispensary instead of subscribing to a benefit society or to a medical aid association. Of course, if they went to the dispensary and offered to buy a ticket it would be refused, but the secretary of a works club, if he has exhausted his tickets can get others without giving another guinea, for he can buy them for 3*s.* 6*d.* each, and is then at liberty to give them or to sell them to whom he pleases. Thus a workman can buy a ticket from the secretary of his club, though he cannot buy one from the dispensary. This roundabout process altogether fails, however, to impress on the workman's mind that he is in receipt of charity. He does not understand charity that costs him 3*s.* 6*d.*, but he quickly realises that he is getting medicine and medical advice at a very cheap rate. As, on the other hand, the medical men have not yet made it evident that they object to this, the workmen naturally conclude that the medical men know their business best and therefore do not scruple to avail themselves of the advantages within reach.

Undoubtedly it is partially the medical men's own fault that the system has been allowed to mature. The medical officer accepts service with the dispensary because he imagines that the patients whom he will see are only poor people who could never consult a private practitioner, and that therefore he is not interfering with or underselling his brother practitioners. Some medical men only go to the dispensary for a few months so as to lend a hand, as they imagine, in a charitable work. Now it will be the business of the Birmingham and District Medical Practitioners' Union to make it clear that the dispensary is no longer wholly and solely a charity, but that in many instances it competes disastrously with the general practitioner. It will be its mission to find, first, a remedy for the abuse, and, secondly, a means of enforcing this remedy, and it must be confessed that this is no easy task. Evidently a wage-limit, or something equivalent to that, will have to be imposed.

But this is far from being the only task that has to be taken in hand. The battle of the clubs will have to be fought on a very large scale, for the abuses arising out of the contract system are also wide-spread throughout the district. Nothing can be accomplished unless it be with the aid of a strong organisation and united action. Now, however, that more than 200 general practitioners are in union there should be less difficulty in inducing the remainder to join also, and thus a practical unanimity may be secured in course of time. In these endeavours the Birmingham and District Medical Practitioners' Union will be supported by the organised members of the profession throughout the kingdom, and the medical profession generally will unite in wishing it every success.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—The Malarial Convention at Nagpur.—Indian Jails.—Condition of the Jails in Bengal.—The Continued Famine.

OWING to the Christmas holidays the plague figures have not been published in time for the mail, but detailed returns since Dec. 14th show that there has been an increase of the epidemic in Bengal, in the North-West Provinces, and in the Madras Presidency, while a decline is recorded for the Bombay district. In Mysore and the Punjab the continued high mortality shows that the disease is but little under control, although the latest figures from the Punjab point to some improvement. The Kapurthala State has become infected for the first time, and the Patiala State shows an increase in the mortality. In Bombay city the deaths from plague continue about the same, but in Calcutta there has been a drop during the past week to 15 deaths. The general mortality has again advanced in Bombay but is exceptionally low in Calcutta. In the latter city the rate is about 32 per 1000, while in the former it is about 52 per 1000. The returns are now calculated according to the results of the recent census, so that comparison with former years is unsatisfactory.

A Malarial Convention is to be held at Nagpur, Central Provinces, on Dec. 27th and following days, when the attendance of medical men from all parts is expected. In the Nagpur Central Jail is a large collection of malarial cases as well as a collection of many varieties of mosquitoes. The members of the Malarial Commission of the Royal Society will be present, so that we may expect some interesting discussions.

A resolution of the Government of India on the reports on the administration of jails in the provinces of British India for the year 1900 refers amongst other things to the increase of 21 per cent. in the admissions, which is attributable to scarcity and high prices. In Burma and Assam, where these influences were absent, there was no increase. There was an increase of 40 per cent. in the numbers convicted of offences against property, and there was an extraordinary increase of no less than 57 per cent. in the number of juveniles sentenced to imprisonment. The percentage of previous convictions of those admitted to jail was 14·15. In this connexion it is satisfactory to hear that more attention is being given to finger-tip impressions, and that a larger number of prisoners were identified by these means. The sickness and mortality tables show a death-rate of 33·46 for all the jails, which is higher than that of the previous year but is said to compare favourably with the rate of mortality recorded among the free population (38·6). This is hardly a fair comparison, because infants, young children, and women in child-birth, not to speak of chronic invalids (too ill for crime), are excluded. The famine is put down as the cause of the increase in admissions; the accommodation of the jails was greatly strained and the high prices ruling occasioned an increase in the cost of maintenance.

In the current number of the *Gazette of India* is given an abstract of the sanitary sheets of the most unhealthy jails in Bengal. They are nearly all described as overcrowded for some period during the year. In the Mymensing Jail temporary buildings were necessitated, but they are described as unusually damp and dirty. In the Dacca Central Jail return it is said that the sanitary defects in the surroundings were too numerous to mention. At Chittagong the rice was poor in quality, badly stored, and weevil-eaten. At Backergunge the water-supply is obtained from the tanks and is very bad. At Burdwan the ventilation of the wards is very defective and the ground around the jail is waterlogged for months in the year. At Rangpur the climate is extremely malarious and almost all the inhabitants suffer. At Ranchi there was an epidemic of pneumonia. At Chupra the country around is waterlogged all through the rains and the water-supply is very unsatisfactory. These few extracts show what an enormous amount is required to be done to improve the sanitary condition not only of the jails but of the towns in which they are situated. The prisoners must offer an immense field for clinical investigation.

The famine figures show a slight increase. There are still nearly 100,000 persons under relief.

Dec. 27th, 1901.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Proposed University for Manchester.

THE special meeting of the Court of Governors of the Owens College held on Jan. 7th was signalised by the passing of an important motion, closely resembling that of the Owens College Associates recorded in THE LANCET of Jan. 4th, p. 60. It was moved by Mr. E. Donner, seconded by Professor Tout:—

That the time has arrived when steps should be taken to secure that there should be, as originally proposed by the Owens College, an independent university in Manchester.

16 members voted for the motion and none against it. On the 10th a special meeting of the Victoria University Court was held at the Owens College to discuss, and if need be to take action on, the report of a committee appointed on June 29th to consider the course to be taken if University College, Liverpool, should apply for a university charter. The questions given in the report for solution were whether (*a*) the three colleges—Owens, with those of Liverpool and Leeds—should remain as constituent colleges of the university; or whether (*b*) there should be a separate university in Liverpool and "a university in Manchester without liability to admit or remain in association with any other college," and also "a university established having its seat in Leeds." The first alternative may be

considered as out of court. Liverpool will without doubt have her university and no one can say that she is unworthy of it. Nor is there any need to attribute her wish to local jealousy, though Sir William Houldsworth said that "they were told that Birmingham had got a university and that Liverpool would have one. ..... It seemed to him merely a question of rivalry between these great towns." After much discussion paragraph (*b*) of the third section of the report was carried by a large majority, and the Victoria University Court has decided that Manchester shall have her own university. With Liverpool gone the Victoria University would then consist only of the Owens College and her younger sister at Leeds. Principal Boddington remarked that "it had been discourteously said that the Yorkshire College held to the federal scheme through consciousness of its own weakness." Whoever said that did not know Yorkshire. With its wealth, public spirit, and north-country grit Principal Boddington might well say that "he had not the slightest doubt that Yorkshire would do its share in the creation of a Yorkshire university." So disintegration is to be the order of the day. Many will regret with Lord Spencer, Sir William Houldsworth, Sir Ughtred Kay Shuttleworth, and others, the break-up of the university federation, and fear that it is not in the interests of higher education. On the other hand, great weight must be attached to the opinion of Dr. A. W. Ward, who was so long and intimately associated with the Owens College and the Victoria University as professor, principal, and vice-chancellor, and who now speaks with still more authority as Vice-Chancellor of Cambridge University, that he voted for a university for Manchester "in the full and firm belief that he was voting in the interests of higher education." The Owens College will therefore in all probability stand alone, as it did for four years, as the only college of the Victoria University. It was further resolved that a committee should be appointed to report on "terms and conditions," &c., that the Chancellor (Lord Spencer) should nominate a certain number of names, and then that he should fix the members to be appointed by each college. It may be hoped that the inevitable rivalry between these various universities will be directed towards raising and not lowering the standard of education.

The Manchester Infirmary.

The question of re-building the Manchester Infirmary has not been brought prominently under notice for some time, though the urgent need for extension has long been the text of the honorary staff. An important paper, however, was read by Mr. W. T. Rothwell at a meeting of the Manchester Statistical Society on Jan. 8th, advocating the removal of the infirmary to Stanley Grove and the relief of the Free Reference Library and the Arts Gallery from their present cramped positions by building on the present infirmary site "a temple of learning and a palace of art" for their accommodation. A vote of thanks to Mr. Rothwell for his paper was moved by Mr. Marshall Stevens, who suggested "that a building of 20 storeys high might be built for the purposes suggested on the infirmary site." This grotesque and transatlantic suggestion was animadverted upon by Mr. T. C. Horsfall who seconded the vote of thanks. He said that there were plenty of buildings of 20 storeys, "but they were only found in towns where there was the grossest indifference to the conditions needed for human welfare." All will agree, I think, with Mr. Horsfall as to this matter. The deterioration of race takes place rapidly enough in our towns as they are at present, but it is slow compared with what it would be in a town consisting of 20-storeyed barracks. Dr. T. Harris said that increased accommodation was wanted and could not be provided by extension of the present premises. He did not think that the site was bad and it was central and convenient. A new infirmary was wanted and the accommodation could be increased from 300 beds to 500 on the Piccadilly site "without encroaching very much on the space available and without building 10 or 20 storeys high." The board of management is practically debarred from building on the space around the infirmary, and it is very questionable whether 500 patients could be accommodated in the best manner on the area covered by the present buildings. Though the present infirmary is central the objections to its removal are very much a matter of sentiment and Stanley Grove would come soon to be considered equally convenient. It is no doubt within the range of fog, which, however, is less pungent than that which at times almost chokes the patients in the centre of the city.

Small-pox.

Small-pox is gradually extending in this part of the country. Manchester, which had been free for more than a year, has one case, one has occurred in Salford, four have occurred in the Stalybridge district, and one case has been notified at Bolton.

Jan. 14th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

The New Chancellor of the University of Wales.

THE Court of the University of Wales, at a special meeting held at Shrewsbury on Jan. 10th, unanimously elected H.R.H. the Prince of Wales as Chancellor of the University in succession to His Majesty the King who was Chancellor from the foundation of the University in 1893. A special meeting of the court is to be held to decide upon the town in which the ceremony of installation shall take place. The corporations of Cardiff, Aberystwith, Bangor, and Swansea have each extended invitations to the court. There are constituent colleges in all of these towns, with the exception of Swansea, and in Cardiff there is a medical school. Not the least noticeable portion of the proceedings at Shrewsbury was the graceful manner in which the senior deputy chancellor (Dr. Isambard Owen) responded to the deputations who urged the claims of their respective towns.

Small-pox near Swansea.

A sudden outbreak of small-pox, directly traceable to a patient who was allowed to travel from London on the ninth day of the disease, has occurred at Ystalyfera, a parish in the Pontardawe Rural District, about 15 miles from Swansea. The patient was a girl who came to South Wales on Dec. 23rd, 1901, and from that day until Jan. 4th, 1902, she was in no way isolated, consequently eight persons, who had been in some way associated with her, have developed small-pox. There is absolutely no means of isolating infectious diseases of any kind in the Pontardawe district, although there is a working-class population of over 20,000 persons, and the constant inter-communication between the inhabitants of the district and those of Swansea renders it especially desirable that there should be means at hand for speedily checking such an outbreak as the present one.

Kingswood Sewage Works.

The Royal Commission on Sewage Disposal has asked to have placed at its disposal the sewage works belonging to the Kingswood Urban District near Bristol for the purpose of taking records and making observations. The system of treatment is by means of a closed tank and continuous filtration upon the lines laid down by Mr. F. W. Stoddart, the city analyst of Bristol.

Weston-super-Mare Isolation Hospital.

The Weston-super-Mare Urban District Council has decided to make no charge for the treatment in the isolation hospital of patients received from working-class families in which the bread-winner is earning less than 25*s.* weekly. Patients from other households will be charged upon a varying scale, with a maximum of two guineas weekly.

Vaccination Fees.

The Axbridge Board of Guardians has declined to accede to the request from the Cardigan Board of Guardians to take steps to obtain the reduction of the fees paid to public vaccinators and vaccination officers. The Axbridge board very properly considered that such reduction would check rather than encourage vaccination and that it would not be desirable to reinstate the public vaccination station.

Cardiff Infirmary.

Dr. C. T. Vachell has been elected honorary consulting physician to the Cardiff Infirmary upon his retirement as honorary senior physician, a position which he has held for the past 15 years. Dr. Vachell has been officially connected with the infirmary for 28 years.

Royal United Hospital, Bath.

At the meeting of the committee of the Royal United Hospital, Bath, held on Jan. 6th Mr. H. G. Terry and Mr. F. Lace, assistant surgeons to the institution, were elected full surgeons vice Mr. R. J. H. Scott and Mr. F. K. Green who have been placed on the honorary consulting staff. For the vacancies thus caused on the assistant staff

there were five candidates, and eventually Dr. W. H. Cooke and Mr. H. L. Brownlow were elected.

The Prevention of Tuberculosis.

A meeting was recently held at Wells, Somerset, under the presidency of the Mayor, with the view of considering the best means of promoting the interests of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis in Wells, Shepton Mallet, and Glastonbury districts. Amongst those present were the Bishop of Bath and Wells, the Dean of Wells, Dr. W. Fairbanks, Dr. W. A. Lauder Smith, and Dr. L. A. Weatherly. The last-named in the course of his speech stated that a site had been purchased at Winsley for the sanatorium, and he added that the committee had a balance in hand of nearly £5000, but it had been decided not to erect the building until they had at least £9000 promised over and above the expenditure in the purchase of the site. After some discussion it was determined that a local committee should collect subscriptions towards the Winsley sanatorium.

Jan. 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

A MEETING of the Glasgow University Court was held on Jan. 9th. The subject of chief interest was a discussion on the report of a committee dealing with the use of the apparatus in the engineering laboratory. The laboratory has cost £40,000 and is an annual charge upon the University funds to the extent of some £600. Hence it is felt in some quarters that it ought not to be monopolised by the professor of engineering. Under the present arrangement the professor has sole control of the laboratory and may use it not only for teaching but also for his own private work, and for the latter purpose may employ technical and other assistants. In these circumstances it is held that a proportion of the fees earned should be paid into the University chest and that a special committee should be placed in charge of the laboratory to regulate the use that is to be made of it apart from teaching purposes. In the course of the discussion the question was raised as to whether it was legally competent for the court to adopt this position, and the matter was therefore adjourned in order that a legal opinion might be obtained.—Mr. R. M. Mitchell has been re-appointed to the court as one of the representatives of the town council for a further period of four years.—The recommendation of the finance committee that a sum of £5000 should be voted to the University led to a long discussion at the meeting of the town council on Jan. 9th, and was ultimately carried by a large majority. The money is placed at the disposal of the authorities to be used either for the improvement of the general equipment of the University or for the establishment of a lectureship on social philosophy. In connexion with this vote an appeal has been issued from the University asking for contributions to a further sum of £5000 in order that the lectureship may be at once founded with an endowment of £350 per annum. Towards this Sir James Bell, Bart., has given a donation of £1050; other sums amounting to £500 have also been promised.—Professor J. G. McKendrick, who has been suffering from an attack of erysipelas, is making satisfactory progress towards recovery; he hopes shortly to resume the duties of his chair.—Professor Bower delivered one of the University free lectures on Jan. 13th, taking for his subject "A Grain of Wheat." In speaking of wheat as an article of diet he described it as being rather deficient in proteids and as having too large a proportion of carbohydrates with some deficiency of the fats. He pointed out that the Italian fared better on his macaroni, prepared as it was from highly nitrogenous wheats, than did the Glasgow children on white bread; for these a return to porridge and milk would be an enormous advantage. Professor Bower also discussed the economic aspect of his subject and urged the establishment of stores of wheat to secure an abundant food-supply in the event of war.

Bequests to Glasgow Institutions.

In accordance with the directions of the will of the late Mr. William Langlands of Glasgow the following legacies have been distributed:—Glasgow Royal Infirmary, £1000; Western Infirmary, £1000; Sick Poor and Nursing Institution, Training Home for Nurses, and Cancer Hospital, each £500; Sick Children's Hospital, Home for Incurables, and Quarrier's Homes, each £250. Various other charitable and philanthropic institutions receive bequests, making a total of over £9000.

Unusual Legal Action.

An action of a somewhat unusual nature has recently been successfully instituted against the Corporation of Glasgow. The pursuer, a labourer in the employ of the corporation, was during the summer of last year, in the course of his duty, engaged in making concrete blocks and in painting copper bonds. As a result he suffered from the consequences of metallic poisoning. In his claim against the corporation he urged that this resulted from the paint supplied to him and contended that it was the duty of the defenders to have warned him of the risks to which he was exposed. As they did not do this they were, he argued, responsible for the harm which he had sustained. The case has been settled out of court, the defenders paying to the pursuer £225 in satisfaction of his claim.

Society of Antiquaries of Scotland.

At a meeting of this society, held on Jan. 13th, Dr. Thomas H. Bryce of Glasgow University gave an account of a series of explorations in the Cairns of Arran and described the human remains there discovered. The work was commenced on the initiative of Dr. Ebenezer Duncan and has received financial support from the Society of Antiquaries. The results, together with those obtained in 1860 by Dr. James Bryce when investigating the stone circles of Arran, give a fairly complete view of the prehistoric sepulchral monuments of the island.

The Carnegie Trust.

A meeting of the executive committee of the Carnegie Trust was held in Edinburgh on Jan. 13th, Lord Elgin being in the chair. The secretary and treasurer submitted their reports for the period ending Dec. 31st, 1901. These showed that fees had been paid by the trust for 2441 students, the sum thus expended amounting to £22,941 16*s.* 6*d.* The annual meeting of the trustees is to be held in London, and the report will probably be made public after this meeting.

King's College Class, Aberdeen, 1864–68.

For the first time since it separated the King's College Class, 1864–68, met for dinner in the Palace Hotel on the evening of Jan. 10th. Professor Davidson (Aberdeen) was chairman and Dr. Thomas Milne (Aberdeen) and the Rev. Dr. Bruce (Banff) were croupiers.

Report of the Aberdeen Public Library.

The arrangement with the Aberdeen University library by which, on payment of a modified subscription of 5*s.* per annum, anyone entitled to borrow books from the public library may become entitled to borrow also from the University library, has worked smoothly throughout the year and has been taken advantage of by 24 borrowers, to whom 193 volumes were issued.

Aberdeen University Extension Fund.

The students of the various faculties at Aberdeen University have subscribed the sum of £205 towards the extension of the University buildings. The list will close on Feb. 20th.

Jan. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital, Dublin.

A LARGE number of the friends of, and subscribers to, Mercer's Hospital, Dublin, were invited by the governors to be present on Jan. 10th on the occasion of the opening of a new children's ward by Lady Arnott. Lord Justice Fitzgibbon occupied the chair, and in his address alluded to the fact that the hospital, founded in 1734, was one of the oldest institutions of its kind in Dublin. Lady Arnott, after a few kindly remarks as to the importance of hospital charity to children, declared the new ward open. Mr. T. W. Russell, M.P., as one of the governors of the institution, proposed a vote of thanks to the medical staff and subscribers and made interesting reference to his experience

of hospitals while a member of the English Local Government Board.

Chair of Physiology, Trinity College, Dublin.

At a special meeting of the President and Fellows of the Royal College of Physicians of Ireland held on Jan. 10th Dr. William H. Thompson, Dunville Professor of Physiology, Queen's College, Belfast, was elected to the chair of Institutes of Medicine in the School of Physic, Trinity College, Dublin, rendered vacant by the resignation of Professor J. M. Purser.

Ulster Medical Society.

The third meeting of the Ulster Medical Society for this session was held in the Belfast Museum on Jan. 10th, Professor W. Whitla, the President, being in the chair. A report having been received from the council in reference to the new medical institute, it was moved by Dr. P. Redfern and seconded by Mr. F. E. MacFarland to accept the very generous offer of the President to build and to equip a medical institute for the society. It was also decided, on the motion of Dr. A. Dempsey, seconded by Professor J. A. Lindsay, to accept the site offered by the President—that is, a plot of ground having a frontage of 50 feet along College-square North, by 93 feet in depth, at a fee farm rent of £60 annually, said rent to begin on May 1st, 1902, and possession to be given at once. Dr. W. Calwell showed (1) a case of Paralysis of the Hypoglossal Nerve, and (2) a case of peculiar Congenital Acro-Dystrophy-Hyperkeratosis, Recurrent Bullæ, &c. Dr. John McCaw showed a case of Birth Palsy of the Hemiplegic Type. Dr. A. B. Mitchell read notes of (1) a case in which six feet of the Small Intestine were successfully Resected; and (2) a case of Intussusception in which Laparotomy was performed. An interesting discussion followed the reading of these communications.

Kissing the Book.

His Honour County Court Judge Kisbey at the Lurgan Quarter Sessions on Jan. 9th made some most sensible remarks on the methods of swearing witnesses. As a plaintiff was about to go through this process his Honour remarked that he wished to impress upon those who found it necessary to attend that court and give evidence that it was not absolutely necessary for them to kiss the book, it being perfectly legal and equally as binding on them to be sworn with uplifted hand, and the same punishment could in that case be inflicted if a witness were found to be perjuring himself. He referred to this matter because of the controversy that had recently taken place in England in regard to it. There the judges, acting, as he thought, with the greatest propriety, had been telling witnesses that they were just as entitled to take the oath with uplifted hand as by kissing the book. No doubt the latter method had great antiquity to justify it, but seeing that the book was kissed by persons in various stations in life, some of whom might be suffering from some disease, he thought the uplifting of one hand the safest method. For instance, it would be very dangerous, he pointed out, for a healthy person to kiss a book that had been similarly used just previously by a consumptive. Of course, if people wished to kiss the book they could do so, but he only desired to inform them that the taking of the oath by uplifting the hand was equally as good. Nothing could be more sensible or more in accordance with sound sanitary views than these most apt remarks of Judge Kisbey.

The Water-supply of Port Ballintrae.

Owing to the lamented death of Mr. James Traill, son of Dr. Anthony Traill of Trinity College, which took place after residing at the favourite watering-place of Port Ballintrae, situated in North Antrim, near Portrush, on Nov. 11th, a great deal of discussion has arisen as to the drainage and water-supply of the district. Mr. D. Huey, the medical officer of Bushmills Dispensary District, has, in a report, urged on the Ballymoney Rural Council the importance of employing an expert to examine the proposed new water-supply (the present is from wells liable to pollution). An architect has been appointed to prepare plans and specifications for the new water-supply.

Queen's College, Belfast.

On Jan. 7th a dinner in honour of Professor Purser, M.A., LL.D., D.Sc., was given in the great hall of Queen's College, Belfast, on the occasion of his retirement from the professorship of mathematics, a position which he has occupied with such marked distinction for a lengthened period of 38 years—that is, more than two-thirds of the whole life of the college. The President of the college occupied the chair and after the usual loyal toasts Dr. Joseph Larmor, Fellow of St. John's College, Cambridge, and secretary of the Royal Society, a Belfast man who was a former distinguished pupil of Professor Purser, proposed, in very happy terms, the toast of the evening, "The Health of Professor Purser," to which that gentleman very feelingly replied. The meeting was a most successful one, many of Professor Purser's old students, arts and medical, coming long distances to do their old teacher honour on his retirement.

The Forster Green Hospital for Consumption.

At the annual meeting of the supporters of this hospital, held on Jan. 13th, it was reported that during the past year, beginning with 23 patients there had been in addition 142, or a total of 165, dealt with. In the out-patient department there had been 1655 attendances, 474 of which were those of new patients. Though the number of deaths from consumption in England and Scotland had decreased during the last 10 years, in Ireland there had been an increase, and in the whole of Ireland there was for the working classes an accommodation of only 85 beds, of which a large number were not free. Financially there was only a deficit of £254 1*s.* 3*d.* The public had given £26 in contributions more than last year, but the increased cost of keeping the extra number of patients amouted to between £600 and £700. The Earl of Shaftesbury sent a donation of £50 for the hospital.

The Belfast Asylum.

The city corporation of Belfast, which took away 60 acres (of which one half is arable, the remainder being wood and stream) of the grounds of the Purdysburn Asylum, for an infectious diseases hospital, has now decided to acquire a farm of 88½ acres adjoining the asylum grounds at £80 per statute acre. When this is added to the asylum grounds it will give a total of about 166 acres.

Jan. 14th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. Le Baron.

DR. LE BARON, founder and honorary president of the Society of Medical Practitioners of the Seine, and the delegate of the various medical syndicates to the Conseil Supérieur de la Mutualité, died on Jan. 2nd. He was born at Segré in 1855, and studied medicine at Paris. On April 2nd, 1891, he gathered together sundry of his professional brethren and founded the Syndicate of Medical Practitioners of the Seine, and ever since that date he has worked for the benefit of this association with unbounded patience and energy. He gave all his time to this work and for some time held the office of vice-president of the Association of Medical Syndicates in France. He was the first and only person who dared at the congress of friendly societies which was held at Bordeaux in 1892 to raise the question of the medical side of friendly societies and to reproach the members with the shameless way in which medical men's services were exploited by a certain number of friendly societies. Dr. Le Baron was an archæologist of no small merit, and in his capacity as a member of the Society for the Preservation of Parisian Monuments he succeeded in preserving from destruction the ruins of the old school of medicine in the Rue de la Boucherie. His death will be a great source of regret to his numerous friends.

Resignation of Professor Lannelongue as President of the General Association of French Medicine.

Professor Lannelongue has just sent in his resignation as President of the above association. The resignation dates from the discussion recently held as to the admission of women to the association—that is to say, not merely the admission of women medical practitioners, but also of the wives of medical men. Professor Lannelongue had no hesitation in voting with the younger members of the association in the cause of progress. Pressing inquiries have been made of Dr. Brouardel as to whether he would accept the office in succession to his colleague.

Examination Frauds.

With a view to doing away with fraudulent practices in examinations the following laws have been passed:—

1. Every fraud committed in connexion with public examinations by the passing of which the candidate enters the public service or acquires a State diploma shall constitute an offence (*délit*).

2. Anyone committing such offence and especially by communicating to a third party or knowingly communicating to any one of the parties interested before any examination the text or matter of the subject of examination, or who shall make use of false documents such as diplomas, certificates of birth, and the like, or who shall act as a substitute for the real candidate, shall on conviction be liable to a term of imprisonment varying from one month to three years and to a fine of from 100 to 10,000 francs or to any one of these penalties respectively.
3. Those found guilty of being accessories shall be liable to the same penalties.
4. Article 463 of the Penal Code is applicable to facts provided for by the present law.
5. The public action at law shall not estop disciplinary action in any case in which the law has provided for this latter course.

Chloroform Anæsthesia in Patients with Morbus Cordis.

M. Huchard does not admit that either morbus cordis or angina pectoris is a contra-indication to the administration of chloroform. He maintains that all patients suffering from morbus cordis, whether mitral or aortic, can be anæsthetised. The only contra-indication, according to him, is when the patient is suffering from toxic alimentary dyspnœa or from a very weak systolic action of the heart. In the latter case anæsthesia is possible, but in the former case the patient should be fed on milk diet so as to get rid of the toxæmia before anæsthesia is undertaken. M. Huchard lays great stress upon the point that anæsthesia should be absolutely complete especially in the case of patients suffering from morbus cordis. In these latter cases the principal danger lies in incomplete anæsthesia so that all reflex action is not completely abolished, and reflex actions are the principal causes of the sometimes fatal syncope which occurs under anæsthesia.

Hygiene in the Army.

On the recent occasion of young soldiers joining the colours the military governor of Paris directed the adoption of the following measures with a view to the limitation of venereal diseases in the army:—1. One of the hygienic conferences held by regimental surgeons for the information of officers and non-commissioned officers shall be devoted to an explanation of the dangers of venereal diseases and the manner of dealing with them. 2. The monthly medical inspection ordered by Article 71 (infantry) of the service regulations shall be of a personal nature as far as possible, each man being examined separately. 3. Measures shall be taken to ensure that non-commissioned officers may be able to consult the regimental surgeons without the fact coming to the knowledge of their subordinates. 4. The supervision of special patients shall be guaranteed by means of a special register or cards for each person kept by the medical officer himself and stored in the poison cupboard of which he alone has the key. Men suffering from the diseases in question shall also be examined periodically so that they may be certified as being still under treatment. 5. Punishment shall not, as a rule, be inflicted in connexion with venereal diseases except in flagrant cases of concealment. This last regulation has already been adopted throughout the greater part of the service; in general only those soldiers are punished who refuse to give information as to the place where they contracted their disorder and who thereby impede the authorities in the taking of measures to protect their comrades. It would be a good thing if this last condition were maintained. Attention is also just now being given to the question of tuberculosis in the army. M. Lachaud has submitted to the Chamber of Deputies two reports recommending that the *conseils de revision* should be empowered (1) to reject young men suspected of a tendency to become tuberculous and (2) to establish sanatoriums for soldiers who have become tuberculous during their period of service. This last condition would have the effect of modifying the law relating to discharge with certificate No. 2 for soldiers thus attacked. These recommendations were submitted to the Chamber on Dec. 19th, 1901, at the instance of the Commission of Public Hygiene, with the result that the Chamber has recognised their urgency and has remitted them to the Army Commission.

Jan. 14th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. Leslie M. Sweetnam.

TORONTO lost one of her foremost and most distinguished surgeons when Dr. L. M. Sweetnam died at Johns Hopkins Hospital, Baltimore, Maryland, U.S.A., on Dec. 11th. Two or three weeks before his death Dr. Sweetnam was operating on a young man with a gangrenous arm the result of a gunshot wound and had the misfortune to cut one of his fingers during the operation. The patient subsequently died from malignant œdema. Dr. Sweetnam contracted blood-poisoning, but for a week or 10 days he continued at his work. Then he went to Baltimore for rest and recuperation. He was recovering from the septicæmia when convulsions suddenly occurred which terminated fatally. Dr. Sweetnam was only 42 years of age, but had already reached the top of his chosen profession. He graduated in 1881 from Toronto and Victoria Universities and at the time of his demise was Associate Professor of Surgery in Toronto University and surgeon to St. Michael's Hospital and to the General Hospital, Toronto.

Canadian Field Hospital for South Africa.

It seems to be very gratifying to the medical profession, particularly to military surgeons, that the offer of a Canadian field hospital for service in South Africa has been accepted by the Imperial Government. It will be a distinct unit and will have no connexion with the Canadian Mounted Rifles which will shortly leave Halifax, Nova Scotia, for the seat of war. Dr. A. N. Worthington of Sherbrooke, Quebec, will be in charge as surgeon-colonel, that officer having already seen service in the South African campaign, and he will have associated with him Dr. Carleton Jones of Halifax as surgeon-major; Dr. H. D. Johnson, Charlotte Town, Prince Edward Island, as surgeon-captain; and Dr. Roberts and Dr. H. E. Tremayne as surgeon-lieutenants, the last two being young practitioners of Toronto.

Canadian Medical Protective Association.

The prospectus of this recently formed association has just been issued to the medical profession in the Dominion. Two years ago, when the Canadian Medical Association met in Ottawa, a strong committee was appointed to report on the formation of such association at the next annual meeting. This was done at the last annual meeting held at Winnipeg, with the result that the organisation was at once perfected and the officers were appointed for the first year. These at once got to work and it is understood that already many members have been secured. The annual fee is $2.50, and the object of the association is the protection of its members from suits at law for alleged malpractice. A meeting of the association will be held annually at the same time and place as the annual meeting of the Canadian Medical Association. A marked feature of the constitution appears in the sentence: "In no case shall the association compromise." The new organisation has absorbed the Medical Defence Union which existed in the eastern townships of the province of Quebec in connexion with the St. Francis District Medical Association. The president is Dr. R. W. Powell, Ottawa, a past-president of the Canadian Medical Association, and the secretary is Dr. F. W. McKinnon, Ottawa.

Dean of McGill Medical Faculty.

After serving for many years as dean of the medical faculty of McGill University Dr. Craik has resigned, and Dr. Thomas G. Roddick, M.P., selected unanimously by his fellow members of the faculty, has been appointed successor by the governors of the University. Dr. Craik has been honoured by being appointed a member of the Board of Governors, the second instance in the history of this famous University where such a distinction has been conferred on a member of a teaching faculty. The new dean has had a distinguished career in the Canadian medical profession. Born at Harbour Grace, Newfoundland, in 1846, he entered McGill University and graduated M.D. as Holmes Gold Medalist in 1868. His connexion with the medical faculty of McGill University began in 1872 and he at present holds the chair of surgery in that institution. He is a past-president of the Montreal Medico-Chirurgical Society, of the Canadian Medical Association, and of the British Medical Association, being the first colonial to be the recipient of the last-named honour. In 1896 he was first elected to the Canadian House of Commons, and ever since he has been prominently identified with bringing about inter-provincial registration between the various provinces of the Dominion. It is fully expected that Dr. Roddick's Bill in this connexion will receive Parliamentary sanction at the coming session of the Dominion House.

Vaccination in Quebec.

The Board of Health of the Province of Quebec, owing to the extensive outbreak of small-pox which has existed now

in that province for some months, has recently issued a special order to all municipalities to enact legislation according to the Quebec Public Health Act and to see that such by-laws are adopted and strictly carried out with regard to vaccination. Such by-laws being in force, any person who cannot establish that he has been successfully vaccinated within seven years or unsuccessfully within six months, unless he has had small-pox or unless his health does not permit of his being vaccinated, will be liable to a fine of five dollars, with another dollar for each day of delay. In the province of Ontario small-pox continues to increase and the Ontario Board of Health has repeatedly called attention to the provisions of the Ontario Health Act. Owing to the mildness of the outbreak people are shunning and neglecting vaccination.

Annual Medical Report of Muskoka Sanatorium for Phthisis.

Dr. J. H. Elliott, the medical superintendent of this institution, has handed out the last annual report. The last official year ended with 61 patients in residence, although there is only accommodation for 50 patients. The increased numbers have been accommodated by the means of tents on the lawns. During the past year 99 male patients were treated; 15 were discharged apparently cured and 29 with the disease arrested. Of the 29, 14 gave promise of cure had they remained longer in the hospital. This would mean that 29 out of 99, or nearly 30 per cent., could have been apparently cured had a longer stay been possible. It is considered highly satisfactory that in 44 out of 99 patients the disease has undergone more or less complete subsidence. These 99 cases were classified on admission as follows: incipient, 24; advanced, 43; and far advanced, 32. The average gain in weight had been 13 pounds. Of the female patients 59 were admitted during the year, 87 being treated altogether. Thus the total number treated during the year amounts to 186.

Toronto, Jan. 3rd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Bubonic Plague.

A FRESH case of plague has developed in Sydney, in a man working in a produce store, but it appears to be a sporadic case, no others having occurred. The patient is progressing favourably. Rat-catching is being vigorously prosecuted, the wharves are being cleaned, and house inspection is being carried on. In the other States no special precautions have been taken as to quarantine, but vessels from Sydney are subjected to fumigation at Brisbane and rat-catching is continued in all the States. Masters of vessels leaving Sydney for other ports in the Commonwealth must be furnished with a certificate that their vessels have been properly fumigated before leaving.

Health of Sydney.

The quarterly report of the officer of health for the metropolitan combined districts of Sydney (Dr. W. G. Armstrong), just published, stated that the number of deaths registered in the metropolis during the quarter ending Sept. 30th was greater than that of any consecutive three months since the year 1898. The principal factor in this increase in the deaths was pneumonia, which caused far more deaths than any other single disease. Other respiratory diseases—bronchitis, whooping-cough, and influenza—were also very fatal, accounting for 24 per cent. of all deaths. Phthisis caused 145 deaths, or 14 more than the average for the same quarter during the past five years. 16 deaths occurred from cerebro-spinal fever, which has been more or less epidemic in Sydney since the latter part of 1899, and appears to be increasing. The number of cases of infectious disease notified during the quarter showed a considerable increase over the figures for preceding years. Scarlet fever appears to have been steadily increasing in prevalence during the whole of the year. Typhoid fever showed the usual winter fall, but was more prevalent than last year. Whooping-cough had been more fatal than for some years past.

The Friendly Societies of New South Wales.

The Friendly Societies Act (1899) of New South Wales provided that within two years all friendly societies must be registered, and this registration involved that the tables of contributions payable by members should be certified to by a qualified actuary. The societies, however, do not want to register and to reveal their financial position, which with very few exceptions is thoroughly unsound. According to a valuation made by the Government Actuary of Friendly Societies, the liabilities incurred by the societies on sickness and funeral benefits amounted to £3,795,013, while the funds in hand were only £537,710, and the present value of future contributions was only £2,003,472, leaving an absolute deficiency of £1,253,831, equal to 6*s.* 8*d.* in the £. In Victoria the accumulated funds are double those in New South Wales and the rates are higher, and in New Zealand, with only half the number of members the funds per head are double those in New South Wales. Hence the societies in New South Wales are agitating for a repeal of the Act of 1899.

Prevention of Tuberculosis.

A largely attended public meeting was held in Melbourne on Dec. 2nd, 1901, to form a Victorian Association for the Prevention of Consumption and other Forms of Tuberculosis on the lines of the National Association in Great Britain. His Excellency the Governor-General presided and made an excellent speech, remarking that while stringent laws and regulations, which have been successful in their effect, have been made to prevent the spread of hydrophobia, small-pox, fevers, and other contagious diseases the prevention of the spread of consumption had not been hitherto seriously undertaken. Nevertheless, more people were killed by it than by any other disease, and in Melbourne alone 800 people died from consumption every year, people mostly in the prime of life. But he had come to the meeting to learn, not to teach. Experts held different views on some questions connected with tuberculosis, but he believed that he was on safe, though unsavoury, ground in saying that one of the most fruitful sources of the spread of consumption was the abominable habit of promiscuous expectoration. He also thought that the inordinate length to which ladies' skirts were worn was a danger in connexion with the spread of consumption and he humbly appealed to the ladies to curtail their skirts and to leave the cleansing of the streets to the municipal authorities. The proposition for the formation of an association to prevent tuberculosis was moved by the Prime Minister of the Commonwealth, who said that places should be provided for the worst cases to be treated and also for those who were less seriously affected. This meant money, and it remained to be seen whether in this first year of their nationhood they were willing to find the money to provide against a danger that was greater than war and more destructive than any war in which the Empire might be engaged. Dr. D. A. Gresswell (chairman of the Public Board of Health), the mayor of Melbourne, Dr. Jamieson (the city health officer), Sir Thomas N. FitzGerald, and others addressed the meeting, and the association was formed and a standing committee was appointed to give effect to its objects.

Hospital Affairs.

In the New South Wales Legislative Assembly the following motion by the Minister for Works was passed:—

That it is expedient that the proposed additions to Prince Alfred Hospital, Sydney, referred to the Parliamentary Standing Committee on Public Works, be carried out, provided that the cost does not exceed the sum of £45,000, and subject to the alterations in the details of the plans as recommended by the said committee.

Some time ago the Board of Public Health in Victoria declined to permit the erection of an infectious ward at the Melbourne Hospital in the place of the tents now used for the purpose. The committee then proposed to erect a non-infectious ward on the site. To this the board also objected as follows:—

In the opinion of the board the construction of the buildings as proposed would not conduce to the healthfulness of the institution. If it is desired to add to the accommodation of the institution it would appear to be well to consider whether reconstruction could not be entertained so as to utilise the land to the best advantage, and to gradually build in accordance with modern principles of hospital construction; and that, if it is felt to be imperative that permanent accommodation be supplied on the site at present occupied by the tents, an area absolutely clear of buildings all round to the extent of at least 35 feet should be provided; also that the board cannot give its approval to the treatment of distinctively infectious cases in any building erected on the grounds of the institution, unless it be one or two cases such as might arise in the institution and be treated in some isolated portion of the grounds.

For some months past improvements have been progressing at the Sydney Hospital. The whole of the old operating-theatre has been demolished, except the outside walls, and has been rebuilt on modern principles. The nurses' quarters

have been considerably enlarged. Seating accommodation has been provided for out-patients who formerly used to wait about in the street outside the hospital. It is contemplated to enlarged the wards for children and to erect a new casualty room.—A meeting of the dental profession was recently held in Sydney to adopt a constitution for a Dental Hospital. The constitution, with a few alterations, was adopted. It provides for gratuitous advice and treatment in all diseases of the mouth to such poor and necessitous persons as are unable to procure the same at their own expense, and that honorary physicians and surgeons shall be appointed to render assistance in administering anæsthetics and in such operations as are not within the scope of ordinary dental surgery.—The Mayoress of Sydney recently opened a new wing of the Infants' Home at Ashfield. At present the home accommodates 20 women and 50 children; in future it will take in 64 children, and comfortable quarters for nurses are provided.

Appointments, &c.

The following have been appointed Examiners at the Sydney University for the Faculty of Medicine:—Anatomy, Dr. A. E. Mills; physiology, Professor E. C. Stirling; pathology, Dr. G. E. Rennie; materia medica, Dr. A. Watson Munro; medicine, the Hon. Dr. Mackellar; surgery, Mr. G. T. Hankins; midwifery, Dr. S. H. MacCulloch; gynæcology, Dr. Fourness Barrington; clinical medicine, Dr. P. Sydney Jones; clinical surgery, Dr. T. Fiaschi; psychological medicine, Dr. Eric Sinclair; ophthalmic medicine and surgery, Dr. W. Adillo Maher; medical jurisprudence and public health, Dr. W. G. Armstrong.—A "Government Gazette" announces the regrading of the Government medical officers, whose classification, without change in regard to salary, will in future be as follows: Dr. R. T. Paton, Government medical officer and vaccinator for Sydney and visiting surgeon, Darlinghurst Gaol; Mr. G. H. Taylor, second Government medical officer and vaccinator for Sydney, pathologist and assisting visiting surgeon, Darlinghurst Gaol.

Obituary.

Mr. Clifton Sturt of Bulli (New South Wales) died suddenly from aneurysm while away on a holiday trip in New Zealand. He was away for his health. It may not be generally known that Dr. James Foulis, who died recently in Edinburgh, was a Sydney boy, the son of the late Dr. John Foulis who had a large practice in Sydney. In his younger days Dr. James Foulis was a noted cricketer and played as wicket-keeper for the New South Wales eleven. He took his B.A. degree at the Sydney University. He was the first white boy born in Lord Howe Island.

Dec. 10th, 1901.

Medical News.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—On Jan. 8th the quarterly court of the directors of this society was held, Mr. Christopher Heath, the President, being in the chair. Two new members were elected and the deaths of four members were reported, as well as that of Mr. J. R. Upton, an honorary member who for many years had kindly given his services as solicitor to the society. The election of a member was declared void. A fresh application for grants was made by a widow, aged 74 years, and relief at the rate of £30 per annum was given. It was resolved to distribute £1282 among the 52 widows, 13 orphans, and the four recipients from the Copeland Fund, now receiving half-yearly grants. The Christmas present, £569, had been given on Dec. 18th, 1901. The expenses of the quarter were £77 7*s.* 6*d.*

THRIFT AND SOCIAL REFORM.—At a council meeting of the National Thrift Society held on Jan. 11th the report for last year was approved and adopted. The report stated that the society's operations had been vigorously carried on in various parts of Great Britain and Ireland, whilst a special feature of the year's work had been the establishment of a Social Reform Branch which had in hand the petition to the authorities respecting the abatement of unnecessary street noises throughout the metropolis. It was proposed to continue this branch of the work under the name of the "Betterment of London Association."

NEW COTTAGE HOSPITAL AT SUTTON, SURREY.—At Sutton, on Jan. 7th, a cottage hospital, the gift of Mr. Passmore Edwards, was opened to the public. The hospital will provide accommodation for 12 patients and advantage has been taken of modern improvements in hospital building and furnishing. The hospital has cost £3000.

HOSPITAL FOR SICK CHILDREN.—It is announced that a bazaar in aid of the Hospital for Sick Children, Great Ormond-street, will be held about the time of the Coronation under the immediate patronage of Her Majesty the Queen, the Prince and Princess of Wales, Princess Louise Duchess of Fife and the Duke of Fife, and Prince and Princess Charles of Denmark.

THE Chelsea Hospital for Women has received from "H. M. E." another sum of £500. This and the preceding similar contribution from the same benefactress have been placed on deposit as a guarantee fund against emergency. The hospital already owes the greater part of its recent improvement to "H. M. E."

LUNACY IN DORSETSHIRE.—At a special meeting of the County Council of Dorset held at the Shire Hall, Dorchester, on Jan. 8th, the Visiting Committee, through its chairman, Lord Digby, submitted a proposal for additional buildings at an estimated cost of about £40,000. The proposal of the Visiting Committee, which is to build a detached house for 100 private patients, was unanimously approved, and the plans, which have been prepared by the architect of the council, Mr. G. T. Hine, gave complete satisfaction to the members. As Dorsetshire was the first county in England to take advantage of Section 255 of the Lunacy Act, 1890, by providing accommodation for private patients in connexion with the county institution this new and further development of the private side of the institution will be watched and followed by many keen and critical eyes.

DINNER TO DR. WILLIAM CAYLEY.—At the Prince's Restaurant, Piccadilly, on Jan. 9th, a most successful dinner was given to Dr. William Cayley by a large number of his former house physicians and clinical clerks, on the occasion of his retirement from the post of senior physician to the Middlesex Hospital, with which institution he had been actively connected for 35 years. The toast of "The Guest of the Evening" was very eloquently proposed by the chairman, Mr. E. A. Fardon, who, after some apposite remarks from Mr. J. Bland-Sutton, presented Dr. Cayley, on behalf of those present, as well as of many who were prevented from attending, with a loving cup suitably inscribed. On Dr. Cayley rising to reply the enthusiasm was unbounded, and it was some minutes before he could obtain a hearing. At the conclusion of his speech the loving-cup was filled and passed round.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An ordinary meeting of the Rahere Lodge was held at Frascati's Restaurant, Oxford-street, W., on Jan. 14th, Bro. P. S. Abraham, M.D. Dub., W.M., in the chair. Bros. Scott and Edge were admitted to the third degree, Bro. Walton Read was admitted to the second degree, and Messrs. Sydney L. Harke, W. Perceval Yetts, and J. C. Stoyte Dunn were initiated into Freemasonry. A sum of 10 guineas was voted from the lodge funds to each of the masonic charities. A past grand officer's jewel was given to W. Bro. the Rev. Sir Borrodaile Savory, Bart., Grand Chaplain. The lodge also contributed the sum of 10 guineas towards a gift to W. Bro. Clement Godson, M.D. Aberd., Treasurer, on the occasion of his silver wedding.—*University of London Lodge, No. 2033.*—The members of the University of London Lodge held their first meeting in 1902 at Freemasons' Tavern on Thursday, January 9th, under the presidency of Dr. Samuel Hague, Mr. W. R. McConnell, K.C., and Dr. A. E. Sansom supporting the chair. After the masonic ceremonies were completed about 25 of the brethren dined together. This Lodge is now nearly 20 years old and numbers amongst its past masters the late Alderman Fowler, Lord Mayor; the late Lord Herschell, Lord Chancellor; the late Dr. Alfred Meadows; and his honour Judge Philbrick, K.C. The secretary is Mr. W. J. Spratling, any letters addressed to whom at Freemasons' Tavern will receive prompt attention. This Lodge is in close touch with the sister University Lodges, the "Isaac Newton," Cambridge, the "Apollo," Oxford, and the "University," Durham.

BRISTOL MEDICAL CHARITIES.—The employés of Messrs. W. D. and H. O. Wills voluntarily collected during 1901 the sum of £443 for the various Bristol medical charities.

AT the Bath Police-court on Jan. 8th a music-hall performer, was summoned for being in a public place—namely, in the Lyric Theatre—on Dec. 4th, 1901, while suffering from scarlet fever. She was fined 20*s.* and costs.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—On Jan. 9th a meeting was held in the Park Hall, Cardiff, on the occasion of the public welcome to Mr. E. H. Griffiths, M.A., F.R.S., the new Principal of the University College of South Wales and Monmouthshire.

GIFT TO DUNDEE INFIRMARY.—At a meeting of the directors of the Dundee Royal Infirmary on Jan. 9th it was stated that a gentleman who did not wish his name to be mentioned had offered to supply and to fit up a Finsen electric lamp for the treatment of lupus.

PRESENTATION.—Mr. W. M. M. Jackson, M.D. Mich., L.R.C.P., L.R.C.S. Edin., on resigning the post of resident medical officer at the Westmorland Consumptive Sanatorium, was presented by the patients, as a mark of their esteem and in recognition of the attention which they received from him, with a silver-mounted walking-stick engraved with his initials.

BRISTOL DISPENSARY.—The annual meeting of the subscribers to this institution was held on Jan. 10th, under the presidency of Mr. Fenwick Richards. The medical report stated that 10,660 patients had been treated during 1901, compared with 11,410 in the preceding year. The financial statement was satisfactory and showed that a legacy of £500 had been received.

SMALL-POX AT EXETER.—Five cases of small-pox have been notified at Exeter and the board of guardians on Jan. 7th, on the recommendation of the medical officer, decided to suspend the visiting arrangements at the work-house. Handbills are to be posted about the city stating that persons over 14 years of age will be revaccinated by the public vaccinator free of charge.

BEQUESTS TO HOSPITALS.—The late Mr. J. L. Molleson of Edinburgh has bequeathed to the Sick Children's Hospital, Edinburgh, and the Victoria Hospital for Consumption £1000 each, and to the Longmore Hospital for Incurables £2000. The residue of the estate, after certain other bequests, goes to the Edinburgh Royal Infirmary.—By the will of Mr. Charles Cleaver of Birkdale the sum of £100 is bequeathed to the Southport Hospital.

PLYMOUTH ROYAL EYE INFIRMARY.—The annual meeting of the subscribers to this institution was held on Jan. 8th, under the presidency of Mr. H. Serpell. The medical report stated that during 1901 there were 255 in-patients admitted, the daily average number in the institution being 18. The out-patients numbered 1905. The financial statement showed that the income amounted to £1284 and the expenditure to £1169. The committee appeals for subscriptions towards the building fund of the infirmary as there is a balance of £12,000 still to be raised.

LITERARY INTELLIGENCE.—Messrs. Smith, Elder, and Co. will publish shortly a work entitled, "Lectures on Chemical Pathology in its Relation to Practical Medicine," by Dr. C. A. Herter, Professor of Pathological Chemistry, University and Bellevue Medical Schools, New York. The book will be issued simultaneously in the United States by Messrs. Lea Bros. and Co. of Philadelphia. Messrs. Smith, Elder, and Co. will also publish immediately a fifth edition, revised and edited by Dr. F. J. Poynton, of Dr. Cheadle's well-known work on the Artificial Feeding of Infants.

MR. W. R. TUCK died at his residence, 1, Windsor-place, Newquay, on Jan. 4th, after a short illness. Mr. Tuck, who obtained the L.D.S. of the Royal College of Surgeons of England in 1863, practised his profession for many years in Truro, where he had an extensive practice and was for many years honorary dental surgeon to the local hospital. He contributed some articles to the medical journals and also published some "Reminiscences of Cornwall." Mr. Tuck leaves a widow, two sons (both members of the dental profession), and four daughters. The deceased gentleman took a great interest in all matters connected with his native county, and by his death one of the oldest, and at one time best-known, residents of Cornwall has passed away.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

The Imperial Health Manual. Being the authorised English edition of the Official Health Manual issued by the Imperial Health Department of Germany. Edited by Antony Roche, M.R.C.P. Irel., &c. Second English edition, revised from the latest German edition. Price 3*s.* net.

CORNISH, J. E., St. Ann's-square, Manchester. (MACMILLAN AND CO., London).

The Victoria University Calendar for the Year 1902. Price 1*s.*

GOVERNMENT PRINTING OFFICE, Washington.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second series. Vol. vi. G—Hernette.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

Progressive Medicine. Edited by H. A. Hare, M.D., assisted by H. R. M. Landis, M.D. Volume iii. September, 1901. Price not stated.

LONGMANS, GREEN AND CO., 39, Paternoster-row, E.C.

Quain's Dictionary of Medicine. By Various Writers. Third edition. Largely rewritten and revised throughout. Edited by H. Montague Murray, M.D., F.R.C.P., assisted by John Harold, M.B., B.Ch., B.A.O., and W. Cecil Bosanquet, M.A., M.D., M.R.C.P. Price 21*s.* net.

PENTLAND, YOUNG J., Edinburgh and London.

The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P. Edin. New series, Vol. x. Price not stated.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

Formulaire Aide-Mémoire de la Faculté de Médecine et des Medecins des Hôpitaux de Paris. Par Dr. Fernand Roux. Fifth edition, revised and enlarged by Dr. Lemanski. Price 4 francs.

"THE LOCAL GOVERNMENT JOURNAL" OFFICE, 2, Dorset-street, Fleet-street, E.C.

The Local Government Annual and Official Directory, 1902. Officially corrected. Edited by S. Edgecumbe Rogers. Price 1*s.* 6*d.*

WRIGHT, JOHN, AND CO., Bristol.

"First Aid" to the Injured and Sick: an Advanced Ambulance Handbook. By F. J. Warwick, B.A., M.B. Cantab., M.R.C.S., L.S.A., and A. C. Tunstall, M.D., F.R.C.S. Edin. Second edition. Price 2*s.* 6*d.*

Elementary Bandaging and Surgical Dressing; with Directions Concerning the Immediate Treatment of Cases of Emergency. For the Use of Dressers and Nurses. By the late Walter Pye, F.R.C.S.; revised by Thomas Carwardine, M.S., F.R.C.S. Ninth edition. Price 2*s.*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARMSTRONG, W. G., M.B., Ch.M. Syd., D.P.H. Camb., has been appointed Examiner in Medical Jurisprudence and Public Health at Sydney.

BARRINGTON, FOURNESS, F.R.C.S., M.B. Edin., has been appointed Examiner in Gynæcology in the Sydney University, New South Wales.

BEDDARD, A. P., M.D., M.R.C.P., has been appointed Physician to the West London Hospital, vice Dr. F. G. D. Drewitt, resigned.

BROWNE, T. W. STANLEY, M.R.C.S., L.R.C.P. Lond., has been appointed District Poor-law Medical Officer for Chatham.

BROWNLOW, HARRY LURGAN, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the Royal United Hospital, Bath.

BRYAN, H. J., M.R.C.S., L.R.C.P. Lond., has been appointed District Poor-law Medical Officer for Chatham.

CANT, A., M.B., B.Ch. Birm., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Coleshill District of the County of Warwick.

CARRE-SMITH, HERBERT, L.R.C.P. Lond., M.R.C.S., has been appointed to the Morley Convalescent Home, St. Margaret's Bay, Dover, and to the Alfred Bevan Memorial Home for Men, Women, and Children, Sandgate.

CATTO, JOHN, M.B., Ch. B. Aberd., has been appointed Medical Officer to the Jaujong Pagar Company, Singapore.

COOKE, WILLIAM H., F.R.C.S.E., L.R.C.P., has been appointed Assistant Surgeon to the Royal United Hospital, Bath.

CROWE, D., M.B., B.S. Dubl., has been appointed Medical Officer for the Ucceby District of the Brigg Union.

FIASCHI, T., M.D., Ch.D. Pisa, has been appointed Examiner in Clinical Surgery at the Sydney University, New South Wales.

FLINT, T. B., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Devonshire Hospital, Buxton.

FREEAR, A., M.R.C.S., F.R.C.P. Lond., has been appointed Resident Medical Officer at the Medway Union Workhouse.

GEMMEL, JAMES FRANCIS, M.B. Glasg. and C.M., has been appointed Medical Superintendent of Whittingham Asylum.

HANKINS, G. T., M.R.C.S., L.S.A., has been appointed Examiner in Surgery at the Sydney University, New South Wales.

HEWER, CECIL M., F.R.C.S. Eng., has been appointed Certifying Surgeon under the Factory Acts for the Tarporley Urban District of Cheshire.

JONES, P. Sydney, M.D. Lond., F.R.C.S., has been appointed Examiner in Clinical Medicine in the Sydney University, New South Wales.

LACE, FREDERICK, F.R.C.S., has been appointed Surgeon to the Royal United Hospital, Bath, vice F. K. Green, F.R.C.S., resigned.

MACCULLOCH, S. H., M.B., Ch.M. Edin., has been appointed Examiner in Midwifery at the Sydney University, New South Wales.

MACKELLAR, C. K., the Hon., M.B., Ch.M. Glasg., has been appointed Examiner in Medicine at the Sydney University, New South Wales.

MAHER, W. ODILLO, M.D., Q.U.I., M.R.C.S., has been appointed Examiner in Ophthalmic Medicine and Surgery at the Sydney University, New South Wales.

MILLS, A. E., M.B., Ch.M. Syd., has been appointed Examiner in Anatomy at the Sydney University, New South Wales.

MUNRO, A. WATSON, M.D. Edin., has been appointed Examiner in Materia Medica at Sydney University, New South Wales.

PERRY, S. H., M.R.C.S., L.R.C.P., has been appointed Medical Officer of Health under the Rural District Council of Spalding.

PETHYBRIDGE, W. L., M.D., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed Honorary Anæsthetist to the Royal Eye Infirmary, Plymouth.

PRITCHETT, S. I., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for the City of Rochester, Medical Officer of Health for the Port of Rochester, and Medical Officer to the Rochester and Chatham Joint Isolation Hospital.

RAY, JOHN HOWSON, Ch.M. Vict., F.R.C.S., has been appointed Surgeon to the Manchester Children's Hospital, vice Mr. G. A. Wright, F.R.C.S.

RENNIE, G. E., M.D. Lond., has been appointed Examiner in Pathology at Sydney University, New South Wales.

REYNOLDS, F. E., M.R.C.S., has been appointed Temporary Medical Officer for the Stoke Gabriel District by the Totnes Board of Guardians.

SINCLAIR, ERIC, M.D. Glasg., has been appointed Examiner in Psychological Medicine at the Sydney University, New South Wales.

STIRLING, E. C., C.M. Glasg., F.R.S., M.D. Cantab., has been appointed Examiner in Physiology at Sydney University, New South Wales.

TERRY, GEORGE HENRY, F.R.C.S. Edin., M.R.C.S., L.S.A., has been appointed Honorary Surgeon to the Royal United Hospital, Bath, vice R. J. H. Scott, F.R.C.S. Edin., M.R.C.S., appointed Consulting Surgeon.

THOMPSON, W. H., M.D.R.U.I., has been appointed King's Professor of the Institute of Medicine in the School of Physic, Trinity College, Dublin, vice J. Mallet Purser.

TWORT, F. W., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Bacteriologist to the London Hospital and Medical College.

WOODMAN, W. J., M.R.C.S., L.R.C.P. Lond., has been appointed District Poor-law Medical Officer for Chatham.

WRIGHT, G. A., F.R.C.S., has been appointed Consulting Surgeon to the Manchester Children's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary £80 per annum, with board, washing, and attendance.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with apartments, board, and attendance.

BOROUGH OF DONCASTER, BALDY-WITH-HEXTHORPE, AND WHEATLEY.—Medical Officer of Health and Doctor to Infectious and Small-pox Hospitals. Salary as Medical Officer £300 per annum, as Doctor to Hospitals £50 per annum.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

BRECON INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, and gas.

BRISTOL GENERAL HOSPITAL.—Surgeon. Also Assistant Surgeon.

BRISTOL ROYAL INFIRMARY.—Casualty Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHARING-CROSS HOSPITAL.—Third Anæsthetist.

CHELTENHAM GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board and apartments.

CHILDREN'S HOSPITAL, Sheffield (Out-patient Department).—Lady House Surgeon. Salary £70 a year, with board, lodging, and washing.

CITY (FEVER) HOSPITAL, Aberdeen.—Resident Physician. Salary £100, with board and rooms.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary £150 per annum, with increase, and apartments, board, attendance, and washing.

DERWENT VALLEY WATER BOARD WORKMEN'S VILLAGE, Birchinlee, North Derbyshire.—Medical Officer.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, lodging, and washing.

EASTERN DISPENSARY, Leman-street, Whitechapel.—Resident Medical Officer. Salary £140 per annum, with residence, coals, and attendance.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, and board and residence.

LONDON HOSPITAL, Whitechapel, E.—Assistant Director of the Pathological Institute. Salary £200 per annum.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Pathologist.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers, unmarried, at the Fever and Small-pox Hospitals. Salary £160 per annum, rising to £200, with board, lodging, attendance, and washing.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—A Senior Assistant, a Pathologist, and a Clinical Assistant (all females).

NEW ZEALAND GOVERNMENT, Thermal Springs.—Balneologist. Salary £1000.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon. Salary £82 per year, with board and washing free.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Clinical Assistant. Board and residence provided.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary £50 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR INCURABLES, Putney Heath.—Medical Officer. Salary £250 per annum.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Salary £400 per annum.

ROYAL INFIRMARY, Sheffield.—Senior Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing. Also Junior Assistant House Surgeon. Salary £70 per annum, with board, lodging, and washing.

ROYAL UNIVERSITY OF IRELAND.—Examiners in Surgery, Midwifery, Pathology, and Ophthalmology.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Resident Medical Officer. Salary £150 per annum, with apartments and attendance.

SCALEBOR PARK, Burley-in-Wharfedale.—Medical Superintendent. Salary £500 a year, with house, board, and attendance.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), S.E.—House Surgeon for Society's Branch Hospital, Royal Victoria and Albert Docks, R. Salary £50 per annum, with board and residence.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Honorary Surgeon.

WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, fire, lights, washing, and attendance.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon.

WREXHAM INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, &c.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon, under the Factory Acts, at Modbury, in the county of Devon.

Births, Marriages, and Deaths.

BIRTHS.

CARRUTHERS.—On Jan. 6th, at Halton, Cheshire, the wife of W. Hodgson Carruthers, M.D. Edin., of a daughter.

LEE.—On Jan. 10th, at Talbot House, Storrington, the wife of F. W. Lee, M.R.C.S., L.R.C.P., of a son.

DEATHS.

CARRINGTON.—On Dec. 25th, 1901, at Catherstone House, Battersea-rise, S.W., Dr. William Henry Carrington, aged 45. Also on Jan. 2nd, 1902, at Gloucester, Frederick George, brother of above, aged 52.

SIMPSON.—On Jan. 13th, at Cotswold, Wallington, Surrey, Frederick Hamilton Simpson, F.R.C.S., aged 37 years.

TAYLOR.—On Jan. 11th, at Hartington-villas, Hove, John Taylor, M.D. Aberd., M.R.C.P., F.R.C.S., formerly of Queen's-road, Bayswater, in his 84th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—I take it as extremely kind of your correspondent Mr. John MacCormac in THE LANCET of Jan. 4th, p. 65, that he should with a rapidity of perception and lucidity of exposition which are remarkable epitomise my arguments in so few words and at the same time confer upon me the wish to champion the cause of the unqualified assistant and the medical aid associations. Apparently he misunderstood the trend of my letter, but I am not responsible for that, and it was not written for the purpose of provoking an argument with him but with the object of drawing attention to the bungling methods of the General Medical Council and to its want of practical acquaintance with the requirements of the general practitioner. The treatment of the unqualified assistant, the medical aid associations, and the Midwives Bill were given as instances, but there are others. What of the poor fellow with the M.D. Brux., L.S.A. Lond., who was persecuted and ruined? and what of the latest piece of tyranny in connexion with the medical officer of the Liverpool Victoria Friendly Association and its qualification of his conduct? Did the means in these cases justify the ends, and were the ends obtained just? Truly, as Mr. MacCormac says, "the duty of the General Medical Council is to protect the public"; it is. And unfortunately so for the practitioner. As for the unqualified assistants many had to go without notice, no probationary period being allowed, but what of that?—their places have been filled, by a different class of man, I grant—the *bonâ-fide* medical student, but still unqualified, and I fail to see the difference between one unqualified man and another. With regard to the medical aid associations it is easy to take the usual stereotyped idealistic view, but that does not explain why the attendance on a working-man who pays his 1*d.* or 2*d.* a week is more dishonourable than a similar attendance at a large hospital which he supports in the same fashion and which he cannot be blamed for taking full advantage of; and it is no nearer and offers no help to the solution of a problem which will have to be solved, and which will require the application of practical common sense and will be in no way affected by idle contempt or high theoretical ideals. As for contract works and their not being science, are not all Poor-law appointments, most large schools, works, &c.—are not these contract works, and on no better scale of pay than medical aid associations? Is not one case as interesting as another, whether it be a contract or a private case? And as for their being "humbug," would your correspondent if he were appointed surgeon to some large works and were receiving 1*d.* a week per head from 1000 workpeople—would he be pleased if that appointment were cancelled and that money handed over instead to some large charitable institution as a gift but to constitute a lien on its services, as is being agitated for to my knowledge? I pass over references to my youth—age does not always signify wisdom; also the views in general on the *locus standi* of the club medical officer with his patients—they can be taken for what they are worth; but I would point out that there are institutions which should be modified and not crushed, that there are abuses which properly treated may be transformed into usefulness, that the General Medical Council's methods whilst being satisfactory to some are not so to others, and that even a club medical officer has opinions and rights, and if he cares to use it the power to see that those rights and opinions are treated with respect. Moreover, the General Medical Council is, or should be, the servant and not the despotic master, and it is time it learnt that fact. With apologies for space,

I am, Sirs, yours faithfully,

Jan. 8th, 1902. HARRY CLOUGH.

To the Editors of THE LANCET.

SIRS,—I was glad to read the letter of Mr. Harry Clough in THE LANCET of Dec. 28th, 1901, p. 1848. I will go further and say that it seems quite time something should be done to put a check to the methods lately adopted by the General Medical Council and the very harsh treatment meted out by that body to the less fortunate members of our profession. I, in common, I suppose, with all qualified medical men, hailed with satisfaction the decision of the General Medical Council to suppress unqualified practice—that is, the practising the professions of physician, surgeon, or accoucheur by gentlemen without a diploma on their own account. But the Council went further and deprived of their living a deserving class of men—I refer to men of middle age, who through no fault of their own, and owing to circumstances over which they had no control, were unable to obtain their diplomas and registration but who as assistants acquired a thorough knowledge of their profession and experience not only in the treatment of disease but in the management of patients, the latter qualification being most important, especially in large country practices, and these laws were passed, so the Council say, "to protect the public," that is our patients, from the unskilled treatment of the unqualified. At the same time (and this seems to be the absurd part of the whole matter) we are permitted the Council to employ as assistants and locums and to place the lives of our patients (the public) in the hands of young men, boys of 26 or 27 years of age just qualified who can have no practical knowledge, or, at least, very little, and, of course, without any experience in the treatment or management of even ordinary illnesses and complaints; the result, of course, being that on the return home of the principal he finds not only his practice ruined, but many of his patients wrongly and unskilfully treated not through any neglect but simply through want of knowledge in the young locum. Then with regard to young club doctors, the action of the Council lately seems unduly severe. No practitioner would of choice become a medical officer to a club or a medical aid society; it means hard work, drudgery, and very poor remuneration. But there must be a beginning, and it seems hard that because a man applying for such a post should solicit the aid of his friends and neighbours he should be accused of "infamous" conduct and threatened by the Council with expulsion from the profession, which means that he must adopt some other means of living or go to the workhouse. Lawyers as well as medical men canvass—they must do so—for public appointments such as coronerships, appointments under the Local Government Board, such as Poor-law, &c., and their conduct is not considered "infamous." There ought to be an appeal in law from these tyrannical decisions of the General Medical Council, and until there is the only course open to medical men who consider themselves wronged is to consult their M.P.'s and to have the matter brought before Parliament.

I am, Sirs, yours faithfully,

Dec. 31st, 1901. FAIRPLAY.

To the Editors of THE LANCET.

SIRS,—The following is a copy of a circular letter being sent to the medical practitioners of the district in which I live.

I am, Sirs, yours faithfully,

Jan. 10th, 1902. ONE OF THEM

[COPY.]

"Dear ——,—An attempt having just been unsuccessfully made to induce a medical practitioner of this town to examine and attend people for a canvassing association for medical aid by means of the false assertion that three other medical men—whose names were given—had already consented to act in that capacity, I acquaint you of the fact and can show you the correspondence and disclaimers if you wish. It is to be expected this exposure will prevent another insidious attack from being made on our status; the more we present a united front against our foes the easier it is for all of us to support the recent notice about medical aid associations from the General Medical Council.

I am, dear ——, yours very faithfully,

December, 1901." ——.

FEES FOR INSURANCE EXAMINATIONS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 14th, 1901, p. 1710, "Cyclops" comments upon the Century Insurance Company sending him 10*s.* 6*d.*—half his usual fee—for an "unusually rigorous" medical examination and full report, in which "about 60 questions had to be answered." In THE LANCET of Dec. 21st, 1901, p. 1776, the manager of the aforesaid company alleges "grave mis-statements." From my own experience of medical examinations for the same company I can confirm "Cyclops" as to the questions being "about 60" and not 10. Moreover, "full and specific answers are particularly requested," thereby indicating an examination careful and thorough, as it always should be. It seems immaterial as to how many sides of foolscap or of some other sized paper the questions fill up, but as to fees Mr. H. Brown has sometimes sent me 5*s.* for similar examinations, and he must expect protests (useless, no doubt) even as to the 10*s.* 6*d.* "fixed by the medical advisers," he says. It does seem strange that the company which he advertises as "specially adapted to the needs of medical men" should be conspicuous in endeavours to underpay them. As one who knows, I would strongly urge medical men, before completing an assurance against sickness, to examine carefully and note the conditions and restrictions of a sickness policy, as well as the prospective contingent benefits.

I am, Sirs, yours faithfully,

Dec. 30th, 1901. VIGILANS.

MEDICAL SOCIETIES.

To the Editors of THE LANCET.

SIRS,—I should be glad of your valuable opinion and advice on the following matter. A proposal was set on foot to establish a medical society in our village and a circular was sent round stating that "every registered medical practitioner in the place and district is eligible for admission and the election is by ballot." 17 out of the 19 resident practitioners have been elected, or have elected themselves, members. The two who have been excluded are on the Medical Register. It is stated that on no account will they be admitted as members. The objects of the society are said to be to promote unity of action and the interests of the profession. Perhaps you will be so kind as to inform me whether this is the usual procedure in the formation of similar societies and whether in your opinion it is likely to attain the ends aimed at.

Yours faithfully,

Jan. 13th, 1902. ENQUIRER.

*** We cannot give any opinion, but we may remind our correspondent that although a man may be eligible for election to a club or society it does not necessarily follow that he will be elected.—ED. L.

ILLUSTRIOUS MEDICAL MEN.

WE have previously noticed the excellent series of reproductions of famous pictures comprised in the "Vibrona Art Series" of Messrs. Fletcher, Fletcher and Co. of Holloway, N., and quite recently we referred to a portrait of Edward Jenner, the apostle of vaccination, which was the first of a series devoted to portraits of illustrious Englishmen. We have now received two additional portraits in this series—those of John Hunter and of William Harvey. Both are from the original paintings in the National Portrait Gallery and are reproduced in the best style on fine plate paper, measuring about 20 by 25 inches. Their nominal cost, *2s. 6d.* each, post free, is an additional recommendation.

THE IDENTIFICATION DEPARTMENT AT PRETORIA.

IN an article on the transactions of the Identification Department of the Red Cross Society of Pretoria during the first phase of the war, which appeared in the third fasciculus of *Militar Geneeskundig Tijdschrift*, 1901, Dr. Romeyn incidentally throws light upon the uncultivated, or, indeed, semi-savage, nature of the Boers. When hostilities broke out, he says, the administrative part of the public health service was in a rudimentary state, the lack of organisation depending, among other things, on the character of the burghers who look upon all regulations as attacks aimed at their independence. Moreover, he continues, their sole knowledge of warfare was derived from fighting Kaffirs and they consequently were absolutely ignorant of the obligations and usages which devolved upon them during a contest with European troops. It was not until after the battle of Elandslaagte that the burghers began to recognise the advantages of order and regularity. Owing to the insufficiency of the telegraph service and also to the confusion caused by the multiplicity of homonyms in the Boer ranks, the returns of killed and wounded in that engagement were full of mistakes and omissions. Professor Molengraaf of Amsterdam, the well-known geologist, thereupon prepared a scheme for the organisation of an identification service, and succeeded in obtaining for it the sanction of the Boer authorities. It was desirable that the members of the new service should be recognised as non-combatants, in order that they might enjoy the prerogatives accorded to the class, and so Professor Molengraaf placed himself in communication with the officer commanding the British forces at Capetown, who immediately signified his approval of the project. An important part of Professor Molengraaf's scheme consisted in the distribution among the fighting burghers of descriptive cards—green for the Transvaalians and orange for natives of the Orange Free State—which should serve the purposes of identification, but here again the prejudice of the burghers proved a stumbling-block. They strenuously objected to carry what they called "death tickets," and much time and trouble were expended in persuading them to do so. The Identification Department ceased to exist on June 6th, 1900, the date on which Pretoria was captured. According to Dr. Romeyn the total mortality on the Boer side up to that date did not exceed 1055, "notwithstanding the fantastic figures given by the English."

LOCUM-TENENTS AND ASSISTANTS' FEES.

MR. PERCIVAL TURNER, writing on the above subject, points out that in "Via Medica," published by Dr. Langley in 1871, page 85, it is stated that the qualified indoor assistant could obtain from £50 to £60 a year, or even £70 or £80, and that an outdoor qualified assistant's salary, without a house, was from £100 a year. Locum-tenents' fees on the same page are given as from £2 2*s.* a week. "In 1895," says Mr. Turner, "£3 3*s.* was the minimum fee for a locum-tenent, and assistants' salaries were proportionally higher; now in 1902 the recognised minimum is £4 4*s.* a week, which seems a fair remuneration in the majority of cases. Has the general practitioner been able to raise his fees of late years in like proportion, or has he not rather, by medical aid associations, cheap dispensaries, and other questionable associations, been compelled to lower his charges?"

"THE TUBOR FILTER."

THE Berkefeld Filter Co. (121, Oxford-street, London, W.) has recently introduced an improved germ-proof filter which is to be distinguished by the name "Tubor." According to a series of bacteriological experiments quoted, "these filters may be regarded as perfectly safe and can be depended on to give a sterile filtrate for four or five days," after which it is desirable that they should be cleaned and sterilised.

X RAYS IN CANCER.

To the Editors of THE LANCET.

SIRS,—I would be very grateful if any of your numerous readers could inform me through your columns of the best and latest methods of applying the x rays in the treatment of cancer. I would also be glad to know of any literature on the subject and where the same could be obtained. I am, Sirs, yours faithfully,

Jan. 13th, 1902. ANXIOUS PRACTITIONER.

MESSRS. SOUTHALL BROS. AND BARCLAY of Birmingham have forwarded us a copy of their tenth annual laboratory report which contains many matters of interest and importance to pharmacists. The sections dealing with the uniformity of galenicals, standards for concentrated infusions, tinctures, &c., are examples. The report is evidently based on a considerable amount of laboratory work.

Dr. F. H. Alderson (Bournemouth).—We have forwarded the subscription to the honorary secretary of the R. B. Anderson Fund, Mr. Walter Monnington, 7, Fig Tree-court, Temple, E.C.

ERRATA.—In our "Analytical Records" in THE LANCET of Jan. 4th (p. 36) the heading "Zoeco" should have read "*Zoeco*" *Milk Proteids with Cocoa*. The manufacturers point out that the word "Zoeco" is used only as a brand name.—Dr. J. F. Gemmel, whose appointment we noticed last week (THE LANCET, Jan. 11th, page 124, line 17, etc., column 1) as medical superintendent of Whittingham Asylum, is senior assistant medical officer of *Lancaster* (not Prestwich) Asylum.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (20th).—SOCIETY OF ARTS.—8 P.M. Dr. S. Rideal: The Purification and Sterilisation of Water. (Cantor Lecture.)

TUESDAY (21st).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Dr. W. Cayley: A Case of Phlegmonous Gastritis due to Streptococcic Infection.—Mr. A. G. R. Foulerton: A Case of Pneumococcic Gastritis with General Infection.—Mr. H. Spitta: The Bacteriology of a Case of Rapidly Spreading Gangrene.—Dr. Bulloch: The Transmission of Hæmolysins from Ascendants to Descendants.

CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine, Chelsea-gardens, Grosvenor-road, S.W.).—8.30 P.M. Communications:—Mr. L. A. Bidwell: Cases of Empyema of the Gall Bladder.—Dr. J. B. Ball: Remarks on the Clinical Diagnosis of Diphtheria in Relation to Treatment.

WEDNESDAY (22nd).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Meeting.

SOCIETY OF ARTS.—8 P.M. Rev. J. M. Bacon: Scientific Observations at High Altitudes.

HUNTERIAN SOCIETY.—8.30 P.M. Dr. A. Chaplin: The Treatment of Pleuritic Effusion.

THURSDAY (23rd).—SOCIETY OF ARTS.—4.30 P.M. Mr. F. H. Skrine: Bengal, the Land and its People.

FRIDAY (24th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. J. Pringle: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Surgical Emergencies.

TUESDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: Plaster of Paris Splints.

ROYAL BRITISH NURSES' ASSOCIATION (10, Orchard-street, W.).—5.30 P.M. Sir Thomas Lauder Brunton: Spiritualism and Hallucinations. (Second Sessional Lecture.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Risien Russell: Intracranial Tumours.

WEDNESDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Harrison: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstrations on Hernia.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Dr. W. Wingrave: Nasal Diseases with Discharge.

THURSDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson, jun.: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Surgical Emergencies.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermatological Demonstration. (Post-Graduate Course.)

FRIDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. StClair Thomson: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Taylor: Diagnosis of Disease of Spinal Cord, illustrated by Cases.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 16th, 1902.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Jan. 10	30·07	S.W.	0·02	57	54	45	50	51	Cloudy
,, 11	30·09	S.W.	...	52	52	50	51	52	Raining
,, 12	30·21	S.W.	0·02	54	50	43	45	46	Cloudy
,, 13	30·26	N.E.	...	48	41	37	37	38	Cloudy
,, 14	30·57	N.E.	...	45	36	33	32	34	Overcast
,, 15	30·53	S.W.	...	51	42	28	Fzn.	29	Foggy
,, 16	30·66	W.	...	49	45	29	41	42	Cloudy

During the week marked copies of the following newspapers have been received:—*Nottingham Guardian, Hertfordshire Mercury, Pharmaceutical Journal, Manchester Guardian, Dublin Evening Telegraph, Southampton Echo, Stafford Advertiser, Glasgow Evening Times, Leeds Mercury, Birmingham Gazette, Coventry Herald, Whitehall Review, Belfast News, Birmingham Daily Mail, Municipal Reformer, Allegemeine Medicinische Central-Zeitung, Rivista Medica de San Paulo, Echo, Daily Mail, Daily Express, Yorkshire Post, Standard, Bristol Mercury, Liverpool Daily Post, La Caducée, Hong-Kong Weekly Press, Herts Advertiser, Times of India, Reading Mercury, Aberdeen Free Press, Mining Journal, Local Government Chronicle, Windsor and Eton Express, Thrapston and Raunds Journal, Review of the River Plate, Revista Ibero-Americana de Ciencias Médicas, Glasgow Evening Times, &c.*

Communications, Letters, &c., have been received from—

A.—Monsieur J. Astier, Asnières; Ariel Motor Co., Birmingham; Abbey Effervescent Co., Lond.; Dr. T. B. Adam, Brechin; Messrs. Allen and Hanburys, Lond.; Messrs. Armour and Co., Lond.; A. R. T.; A. B.; A. M.; Dr. F. H. Alderson, Bournemouth; Mr. T. Allen, Malvern Link; Army Medical Service, Director General of; A. G.; Apollinaris Co., Lond.

B.—Dr. G. F. Buzzard, Lond.; Dr. F. T. Bond, Gloucester; T. B. Browne, Ltd., Lond.; Monsieur O. Berthier, Paris; Messrs. J. H. Booty and Son, Lond.; Messrs. Bayliss, Thomas, and Co., Coventry; Bristol Royal Infirmary, Secretary of; Bolton Infirmary, Secretary of; Messrs. Brady and Martin, Newcastle-on-Tyne; Birmingham General Hospital, House Governor of; Mr. F. Barraclough, Leeds; Colonel A. W. Bell, Witney; Mr. W. Bothamley, Lond.; Dr. J. Broadbent, Lond.; Mr. K. V. Baghot de la Bere; *British Medical Journal*, Editor of; Berkfeld Filter Co., Lond.; Birmingham Children's Hospital, Secretary of; Dr. D. Bower, Bedford; Dr. Robert Barnes, Eastbourne; Messrs. Burroughs, Wellcome, and Co., Lond.

C.—Mr. J. B. Cornish, Manchester; Messrs. S. Clark and Co., Lond.; Mr. C. Charter, Hull; Messrs. J. A. Carveth and Co., Toronto; City Fever Hospital, Aberdeen, Clerk of; Cornwall County Council, Chairman of; Captain R. Cornwall, I.M.S., Madras; Mr. W. H. Clarke, Macclesfield; Messrs. Carfax and Co., Lond.; Messrs. Carter Bros., Lond.; Mr. J. M. Cotterill, Edinburgh; C. A. J.

D.—Dr. Des Vœux, Lond.; Messrs. Dowdeswell, Lond.; Mr. L. S. Dudgeon, Lond.

E.—Messrs. Evans, Lescher, and Webb, Lond.; Messrs. Evans, Sons, and Co., Liverpool; King Edward's Hospital Fund, Hon. Secretary of; Electrical Standardising and Training Institute, Lond.; Messrs. Eason and Son, Dublin; Enquirer; East Suffolk and Ipswich Hospital, Ipswich, Secretary of.

F.—Dr. A. Flack, Rome; Messrs. Fletcher, Fletcher, and Co., Lond.; Herr G. Foch, Leipzig.

G.—Sir William Gairdner, Edinburgh; Dr. J. F. Gemmel, Lancaster; G. R. T. C.; Dr. A. S. Grünbaum, Liverpool.

H.—Dr. G. Hirsch, St. Petersburg; Dr. J. Hinshelwood, Glasgow; Messrs. Heath and Co., Lond.; Mr. F. Hall, Beverley; Dr. H. Hilliard, Lond.; Humphreys, Ltd., Lond.; Mrs. Howell, Derby; *Hairdressers' Weekly Journal*, Editor of; H_2O; Messrs. C. J. Hewlett and Son, Lond.

I.—Incorporated Medical Practitioners' Association, Lond., General Secretary of.

J.—Dr. Oscar Jennings, Paris; Mr. G. B. Jeafferson, Framlingham; Messrs. Jewsbury and Brown, Manchester; Mr. W. M. Jackson, Hove; Mrs. Theodora Johnson, Bristol.

K.—Mr. D. S. Kemp, Lond.; Messrs. R. A. Knight and Co., Lond.; Mr. S. J. Kerfoot, Bedminster.

L.—Mr. F. W. Lowndes, Liverpool; Mr. T. Lissaman, Bolton; Dr. A. Leitch, Cornsay Colliery; Mr. R. W. Lloyd, Lond.; *Londonderry Sentinel*; Miss F. Leech, Lond.; Dr. R. Loij, Montreux; Messrs. Lee and Martin, Birmingham; Mr. W. G. Lyster, Lond.

M.—Mr. J. Y. W. MacAlister, Lond.; Mr. J. Macdonald, Lochgelly; Dr. E. Mackey, Brighton; Dr. G. Murray, Newcastle-on-Tyne; Dr. E. D. Marriott, Nottingham; Maltine Manufacturing Co., Lond.; M. F. W.; Messrs. P. Mackenzie and Co., Liverpool; Manchester Clinical Hospital, Secretary of; Male Nurses' Temperance Coöperation, Lond.; Metropolitan Asylums Board, Clerk to.

N.—Dr. G. Newman, Glasgow; Mr. G. T. W. Newsholme, Sheffield; Northumberland County Asylum, Morpeth, Secretary of; Messrs. Noble, Pinney, and Welland, Cleveland, Ohio; Mr. C. Newark, Lond.; Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.

O.—Dr. Bernard O'Connor, Lond.

P.—Mr. Y. J. Pentland, Edinburgh; Dr. Chas. Porter, Shrewsbury; Messrs. Paschtner and Co., Lond.; Messrs. Parke, Davis, and Co., Lond.; P. J. B.; Portland Urban District Council, Clerk of; Messrs. Peacock and Hadley, Lond.

R.—Dr. F. W. Rowland, Brighton; Mr. E. A. Reynolds-Ball, Lond.; Mr. Grant Richards, Lond.; Registered Nurses' Society, Lond.; Mr. E. J. Reid, Lond.; Royal Meteorological Society, Assistant Secretary of; Reading Pathological Society, Hon. Secretary of; Dr. H. D. Rolleston, Lond.

S.—Dr. E. A. Spitzka, New York; Mr. T. Bridgman Smith, Hove; Messrs. Street and Co., Lond.; Messrs. W. B. Saunders and Co., Lond.; Stockton and Thornaby Hospital, Secretary of; Surgeon, Redhill; Sanitary Engineering and Ventilation Co., Lond.; Sanitary Institute, Lond.; The Sergeant at Arms, House of Commons; S. A. B.; State Children's Association, Secretary of; Dr. J. H. Stowers, Lond.; Messrs. G. Street and Co., Lond.; Salford Union, Clerk of; Messrs. W. H. Smith and Son, Liverpool; Messrs. Smith, Elder, and Co., Lond.; Scholastic, Clerical, &c., Association, Lond.

T.—Dr. F. W. Tunnicliffe, Lond.; Dr. J. C. Thresh, Chelmsford; Mr. P. Turner, Lond.; Throat Hospital, Lond., Secretary of.

V.—Vicar; Vinolia Co., Lond.

W.—Mr. F. W. Waters, Sheerness; Westminster General Dispensary, Lond., Secretary of; Western General Dispensary, Lond., Secretary of; W. L.; Wolverhampton General Hospital, Secretary of; Wrexham Infirmary, Secretary of; Mr. A. P. Walters, Newport, Isle of Wight; Winnipeg Medical Society, Secretary of; Mr. M. A. Withers, Lond.; Mr. C. J. Wright, Leeds.

Y.—Dr. H. W. Young, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. D. A. Alexander, Leek; Dr. E. Allen, Hawes; A. S. M.; Dr. D. Angus, Stevenston; Dr. F. R. B. Atkinson, Radcliffe; A. W.; A. W. W. D.; Mr. F. Algar, Lond.; A. T.; A. G. E., Lond.; A. M.

B.—Dr. S. H. Belfrage, Lond.; Mr. T. W. Bevan, Nantyglo; Mr. E. H. Beaman, Misterton; Mr. T. G. Barton, Boscombe; Lieutenant-Colonel S. H. Browne, I.M.S., Aden; Dr. M. M. Bowlan, Lond.; Brin's Oxygen Co., Lond.; Messrs. Bostel and Son, Lond.; Mr. J. Brander, Southend-on-Sea; Mr. B. Bysack, Khetri, India; Messrs. J. W. Bower and Co., Lond.; Belfast District Lunatic Asylum; B. P. A.; Mr. J. C. Bagge, Enfield; Beta, Thornton Dale; Messrs. Brown, Gould, and Co., Lond.

C.—Dr. W. Cowle, Charlton; Dr. W. V. Coppinger, Manipur, Assam; Chester General Infirmary, Clerk of; Mr. R. W. Crowley, Bradford; Mr. L. P. Chaliha, Sibsagor, Assam; Mr. C. Candler, Melbourne, Australia; Mr. H. W. R. Clarke, Stourbridge; Chesterfield and North Derbyshire Hospital, Secretary of; Dr. C. W. Chapman, Lond.; C. R.

D.—Dr. O. I. Davies, Gronant; Messrs. Delkin and Rocholl, Naples; Dr. W. Duff, Wishaw; Dr. T. Domela, Tunis; D. W.; Mr. W. W. David, Llwynypia; Dispenser, Winson Green.

E.—Mr. W. P. Everard, Athlone; Dr. Moh El Calamawy, Assiout; E. H.

F.—Mr. A. Ford, Waterford; Dr. G. Fyfe, Saltburn-on-Sea; Fellows Medical Manufacturing Co., Lond.; Folkestone Medical Society, Secretary of; Mr. W. Faulkner, Lond.; F.R.C.S.A.

G.—Dr. W. G. Galletly, Northwold; Dr. R. Gooch, Lond.; G. N. W.; Messrs. Giles, Schacht, and Co., Clifton; Mr. J. J. Gray, Brecon; Messrs. W. Green and Sons, Edinburgh; Guest Hospital, Dudley, Secretary of; G. F.

H.—Dr. H. Humphreys, Torquay; Mr. T. W. Hughes, Llanrwst; Miss J. M. Hayes, Paignton; Halifax Corporation, Cashier of; Messrs. Hastings Bros., Lond.; Dr. L. Harris-Liston, Digbys; H. A. B.; H. B.; H. W. E.; Hogg, Lond.

I.—Messrs. Isaacs and Co., Lond.; Index, Lond.

J.—Dr. W. Denton Johns, Parkstone; J. T. R. M.; J. W.; J., Newcastle-on-Tyne; J. S. C.

K.—Dr. J. G. Kerr, Cumnock; Messrs. Knight and Co., Lond.; Mr. E. W. Kemp, Castleford; Mr. H. Knevitt, Lond.; Mr. B. L. Kalra, Poonah, India; Messrs. Kilner Bros., Lond.; Keith's Advertising Agency, Edinburgh; Kerochyle Co., Lond.; Dr. S. Kontoleon, Piræus; Dr. S. J. J. Kirby, Fressingfield; K. R. D. S.

L.—Mr. L. F. Leslie, Evesham; Dr. T. R. Lombe, Torquay; Mr. A. J. Lawman, Bideford; Dr. G. A. Leon, Sidmouth; Dr. E. Laws, Farndon; Mr. L. Lewis, Neath; Mr. A. F. Law, Exeter; Lancaster County Asylum, Secretary of.

M.—Mr. H. Mimachi, Okayama; Dr. J. L. Minter, Hove; Mr. S. R. Merry, Hemel Hempstead; Mr. E. Marett, Jersey; Mr. J. Murray, Lond.; Mr. R. Machin, Lond.; Dr. A. Macgregor, Lond.; Mr. S. B. Mason, Pontypool; Medical Society of Victoria, Melbourne, Hon. Secretary of; Mr. T. H. Moyles, Woolwich; Dr. A. Macfadyen, Lond.; Medicus, Darlington; Mile End-road (286), Lond.

N.—Mr. G. Naidu, Hyderabad, Deccan; Nordrach-upon-Mendip Sanatorium, Blagdon; Dr. W. P. Nicol, Mount Ayliff.

O.—Dr. J. W. Ogle, Lond.; Mr. A. Oberfell, Lond.

P.—Dr. C. Pollard, Worcester; Mr. S. E. Price, West Chislehurst; Dr. W. Park, Montreal; Mr. de C. Potterton, Markfield; Mr. H. E. L. Pittway, Stansted; Mr. A. W. Pierce, Liverpool; Prideaux Pure Casein and Life Food Co., Motcombe, Dorset; Messrs. Pope and Plante, Lond.

R.—Mr. R. P. Rowlands, Lond.; Royal Hospital for Incurables, Dublin, Secretary of; Dr. W. B. Ransom, Nottingham; Dr. A. Richardson, Aberlour; Dr. R. J. Reece, Lond.; Mr. W. Russell, Lakhimpur, Assam; Dr. J. D. Rawlins, Dorking; Dr. F. W. Robertson, Wimbledon; Mr. J. Rigby, Preston; R. H. W.; Royal Victoria Hospital, Belfast.

S.—Dr. Ed. Schloesser, Nice; Dr. J. A. Shaw-Mackenzie, Lond.; Sanitas Co., Lond.; Messrs. Sykes, Josephine, and Co., Lond.; Mr. E. T. Stanley, Lond.; S. M.; Mr. D. Stewart, Bridge of Allan; Dr. M. Seraidarian, Kerassunde, Turkey; *Sheffield Independent*; Stretford-road (439), Manchester; Messrs. Stubbs and Roscoe, Lond.; Dr. W. Shears, Catford; Messrs. Spiers and Pond, Lond.; Dr. M. A. Shaw, Island of Saba; Street Court, Kingaland, Medical Superintendent of; S. G. M.

T.—Mr. N. Taylor, Sheffield; T. J. F.

V.—Vinolia Co., Lond.

W.—Mr. O. E. Ward, Glossop; Messrs. Whitehead and Bros., Lond.; Mr. R. A. W. Whitestone, Clavadel, Switzerland; W. A. J.; Messrs. Warburton and Grant, Treherbert; W. S. R.; Mr. J. J. Waddelow, Whittlesey; Messrs. H. Wilson and Son, Lond.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0	5	0
Official and General Announcements	Ditto	0	5	0
Trade and Miscellaneous Advertisements	Ditto	0	4	6
	Every additional Line	0	0	6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.